Modern packaging



Nominated for *Packaging's Hall of Fame*® Story on Page 104

November 1953



Satisfied Customer

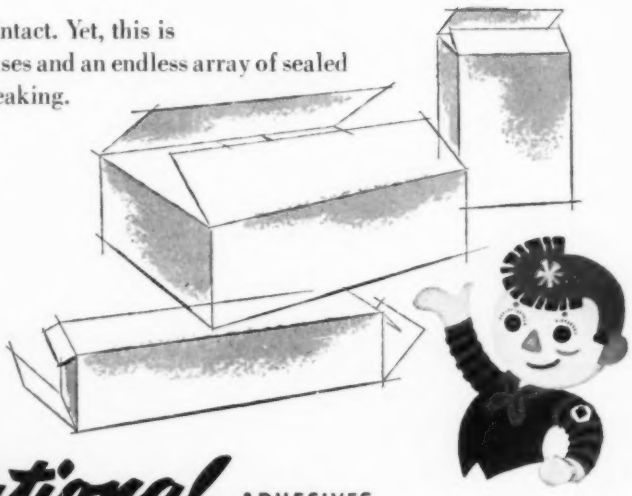
—because of a so seldom noticed item as glue.

As you can see, this housewife's manicure is still intact. Yet, this is the hand that opens *home delivered* corrugated cases and an endless array of sealed cartons. All, without tugging, straining or nail breaking.

Imaginative adhesive research is responsible.

A National glue, known as SOFT SEAL® allows case and carton tops to be lifted with ease. Still, its bond will not permit corrugated cases or cartons to pop open during shipping or storage on pantry shelves.

We'll be happy to demonstrate the goodwill advantages of SOFT SEAL.



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RESYNS®

NATIONAL STARCH PRODUCTS INC.

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GAIR

develops new cosmetic carton

LAMINATED ACETATE GIVES ADDED SPARKLE TO GOURIELLI PACKAGES

This new type of folding carton, used by Gourielli for its men's toiletries, is bringing a striking style note to cosmetic and drug counters.

Perhaps Gair can help make your package a dramatic standout on counters . . . on shelves . . . in window displays. Our packaging engineers and designers will be glad to talk over your particular carton needs.

Write for Folding Carton Brochure

GAIR

FOLDING CARTONS
SHIPPING CONTAINERS
PAPERBOARD

ROBERT GAIR COMPANY, INC. • 155 EAST 44TH STREET • NEW YORK 17

Modern packaging

Vol. 27 No. 3 November 1953

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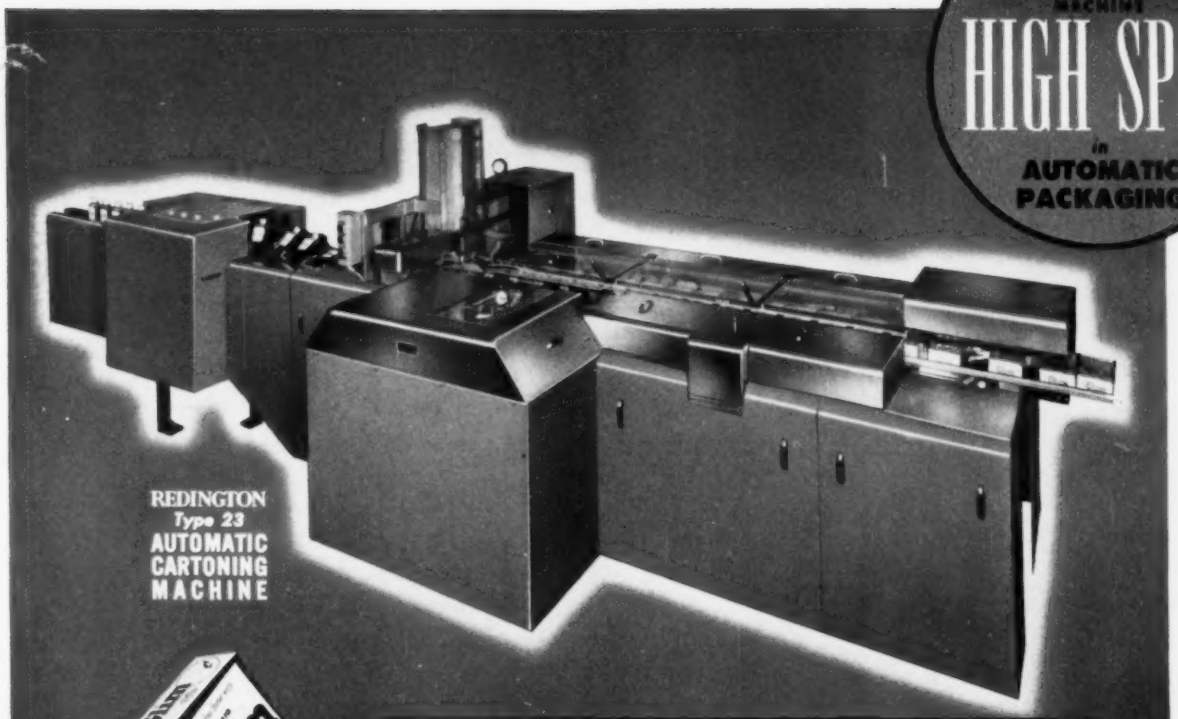
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another REDINGTON MACHINE

HIGH SPOT

in AUTOMATIC PACKAGING





HERE IS HOW THIS* REDINGTON *Type 23* CONTINUOUS LOADING CARTONER *PACKAGES B. T. BABBITT, INC.'s "GLIM" AUTOMATICALLY . .

Filled, capped and labeled bottles enter the REDINGTON standing upright on the intake belt. The machine transfers the bottles into the pockets of the article conveyor, placing them in a horizontal position. As each filled pocket reaches the magazine in which cartons have been flat-stacked, the machine feeds and forms a carton, inserts a 12-oz. bottle of GLIM, and closes the carton by tucking in the end flaps.

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3) All bearings lubricated—lubrication lines brought to central points wherever practical.
4) Main drive motor and independent motor-driven vacuum pump assure constant vacuum supply (for carton feeding) at all times.
5) Gear train drive means smooth operation.
6) Ground and polished shafting, made to special REDINGTON specifications, used throughout.
7) Every part on every REDINGTON *stamped* with Detail Number for easy identification in checking against parts list.
8) Numeral nails identify all adjustments—changing from one size to another is greatly simplified.

TROUBLE-FREE FROM THE DAY OF DELIVERY

The day this *Type 23* REDINGTON was installed in the Babbitt packaging line, it went to work at full capacity. There was no expensive and exasperating waiting period of adjusting and readjusting, timing and resetting—the REDINGTON was ready for efficient operation when it was delivered.

You see, REDINGTON machines are so expertly engineered, so carefully and substantially built, and so thoroughly tested before they ever leave the REDINGTON plant that there is no necessity for trial-and-error installation methods. And the same factors continue throughout the long productive life of REDINGTON machines to bring dividends of less down-time, lower maintenance and more consistent speed and quality of production to packagers in every field.

Today's labor costs being what they are, automatic packaging is becoming more and more a "must" consideration for every packager with a moderate to large production. REDINGTON'S more than half a century of experience in widely diversified fields is a great help in determining just how manufacturing profits can best be improved by the proper type of equipment. Whether your problem is relatively simple or highly complicated, REDINGTON engineers will be glad to discuss it with you—why not call us in now?

And write today for our 32-page illustrated catalog of the full REDINGTON line of packaging machines—you'll see how well REDINGTON has succeeded in developing faster, better, more economical packaging for products of every description, from Razor Blades to Red Lead.

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342 Madison Ave., Room 828A, New York 17, N. Y.

REDINGTON

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— since 1897 —

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MODERN PACKAGING is regularly indexed in *Industrial Arts Index*.

Everybody wins

EVERY TIME A NEW KIND OF PACKAGE comes to the fore, the competition-minded American public starts wondering about what's going to happen to the old established forms of packaging with which the newcomer seemingly competes.

A few years ago financial circles were intrigued with the idea that cans and glass were fighting a battle to the death over beer. That situation has resolved itself, as all packaging competition must, on the basis of what the consumer wants. Some like cans, some like one-way glass, some like the economy of the deposit bottle. The net result is that more beer is being sold than ever before and *both* cans and glass are enjoying increased business.

The latest case in point is the polyethylene squeeze bottle.

During the period 1949-1952, while polyethylene bottles were becoming widely known and building up to use at the current rate of 1 million gross per year, annual shipments of glass containers *gained* more than 25 million gross and in 1952 reached 115.6 million gross. In the three product fields in which polyethylene bottles might have been thought to be making inroads on glass—toiletries, chemicals and drugs—the gain for glass was 4.7 million gross, or 20.6%. In the one field of these three in which the polyethylene bottle has had its greatest success—toiletries—the gain for glass was an impressive 26.9%, considerably above the average.

What has happened between glass and polyethylene is pretty well illustrated in the deodorant field. The convenience of the squeeze bottle, which Dr. Jules Montenier pioneered, created new deodorant users and seemed to make everyone—including the men—deodorant conscious. But have the other types of deodorant packaging disappeared? Not at all. The fact is that while deodorant sales have doubled in the last few years, only 70% of the gain is accounted for by squeeze-bottled products and a 30% gain is found for conventional types—nearly all of them in glass.

Once again the lesson: When through greater convenience in packaging you make a product more attractive, you stimulate *added* sales and all packaging gains.

The Editors



Little kids are big business!

88% of mothers take their children to the super market at least once a week...77% of them buy at the children's request. Bright, eye-catching colors on packages that are easy for the kids to handle, easy to display and easy to remember have great appeal. How does a kids-eye-view of your package stack up? Dobeckmun... will give you a Package Appraisal and tell you how to step up your sales. Call your Dobeckmun man today.

The Dobeckmun Company, Cleveland 1, Ohio • Berkeley 2, California • Bennington, Vermont

Atlanta • Boston • Charlotte • Chicago • Cincinnati • Dallas • Detroit • Indianapolis • Kansas City • Lexington • Los Angeles • Memphis • Milwaukee
New Orleans • New York • Philadelphia • Pittsburgh • Portland • Richmond • Rochester • Salt Lake City • Seattle • St. Louis • St. Paul • Tampa

Have you seen the new cap on E.D.SMITH'S jams?



E. D. Smith's products have long been highly popular with Canadian housewives. Now the packer has provided the ladies with an additional reason for putting these preserves and jams in their market basket . . .*

The Crown Vacuum Lug Cap

. . . this is the closure that has everything housewives want. It answers their first demand for dependable sealing . . . and in addition provides easy hand removal without tools or implements . . . makes a perfect re-seal over and over because it's rigid and won't lose its shape.

Crown Vacuum Lug Caps and the Crown machine that applies them make a vacuum sealing system that offers the packer fast, smooth application and secure sealing. Ask your local Crown Closure Representative to give you full particulars about hermetic sealing with Crown Vacuum Lug Caps . . . THE VACUUM SEAL WITH SALES APPEAL. Crown Cork & Seal Company, Closure Division, Baltimore 3, Maryland.





CROWN CLOSURES

Approved by millions of housewives

* *E. D. SMITH'S JAMBOREE is a delightful combination of various citrus fruits, peaches and cherries. The other product shown here is pure strawberry jam. Both of these products are sealed with Crown Vacuum Lug Caps attractively decorated in three colors on white. These products are made by E. D. SMITH & SONS, Limited, Winona, Ontario.*

Another new development using

B. F. Goodrich Chemical *raw materials*



B. F. Goodrich Chemical Company does not manufacture this desiccant bag. We supply the Geon latex only.

"Breathing" Bag Sops Up Moisture

—cuts shipping damage!

Shipments of tools, motors and clothing overseas or to humid climates risk damage by moisture or mildew. Pictured here is a new type desiccant bag which "breathes" and does a superb job of sopping up damaging moisture.

Unusual feature of this new bag is the non-woven fabric, made of random cotton fibers with liquid Geon vinyl latex as a binder saturant.

Made into bags to carry the desiccant, this fabric has exceptionally high tensile strength and good tear resistance. Yet its porosity permits moisture inside the airtight container to be adsorbed easily on the desiccant. And the bag can be used over and over merely by heating to drive out the moisture.

Geon vinyl latices have many applications—such as providing a water-proof, grease-resistant coating to paper and boxboard; leather finishing; pigment binding and fabric sizing.

Perhaps a Geon material can help you improve or develop more saleable products—where resistance to heat and cold, moisture, abrasion, oil, grease and many chemicals is required. For technical advice, please write Dept. GL-11, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio, Cable address: Goodchemco. In Canada: Kitchener, Ontario.



GEON RESINS • GOOD-RITE PLASTICIZERS . . . the ideal team to make products easier, better and more saleable

GEON polyvinyl materials • HYCAR American rubber • GOOD-RITE chemicals and plasticizers • HARMON colors

PROTECTED by Riegel



THESE NEW DOMINO STAY-SOFT PACKAGES USE A LINER OF SPECIALLY DEVELOPED RIEGEL GLASSINE TO KEEP BROWN SUGAR MOIST AND SOFT . . . CONFECTIONERS SUGAR DRY AND FLUFFY. THE ROLL-DOWN LINER FOLDS BACK NEATLY IN PLACE TO KEEP SUGAR FRESH . . . THE TUCK-IN FLAP, TOO, MAKES PACKAGE EASY TO OPEN AND CLOSE.

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—plus effective trademark display with

Rheemcote

55-GALLON POSTER DRUMS

PERFECT INSIDE AND OUT!



INSIDE . . . Through constant research, Rheem continues to develop specially prepared container linings for products which cannot be shipped safely in ordinary steel containers. For the manufacturer of new products, Rheem laboratory facilities are fully equipped to test the product and to recommend a suitable lining.

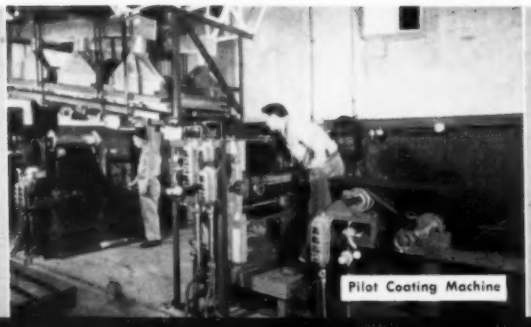
and OUTSIDE . . . Rheemcote containers can be lithographed in any number of colors, any design, including halftones. Decorations like the diagonal stripe on this VELVET drum are possible only with the exclusive Rheemcote process. The high-gloss finish is tough, long-lasting.

Your product . . . your trademark gains extra prestige and new sales opportunities when dramatically presented in Rheemcote drums. Inside and out, Rheemcote offers a sure way to build new customers and new sales. Write for free colorful booklet on this powerful new advertising medium. Rheem Manufacturing Company, General Sales Offices, 570 Lexington Avenue, New York 22, N. Y.

SELL as you SHIP with Rheemcote DRUMS

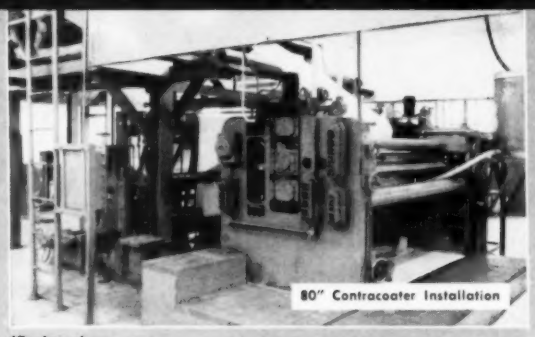
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Pilot Coating Machine

CONTRACOATER* a reverse roll coater



80" Contracoater Installation

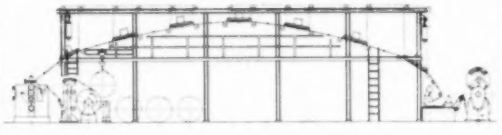
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for the coating of lacquers • resins • organisols • plastisols on paper • foil • fabric and film.

Arrange for your materials to be trial-coated on the Contracoater in the new Dilts Laboratory at Fulton. Bulletin DLF-1005 describes the new laboratory and outlines the arrangements for its use. Write for our new Coating Bulletin 12-DM.

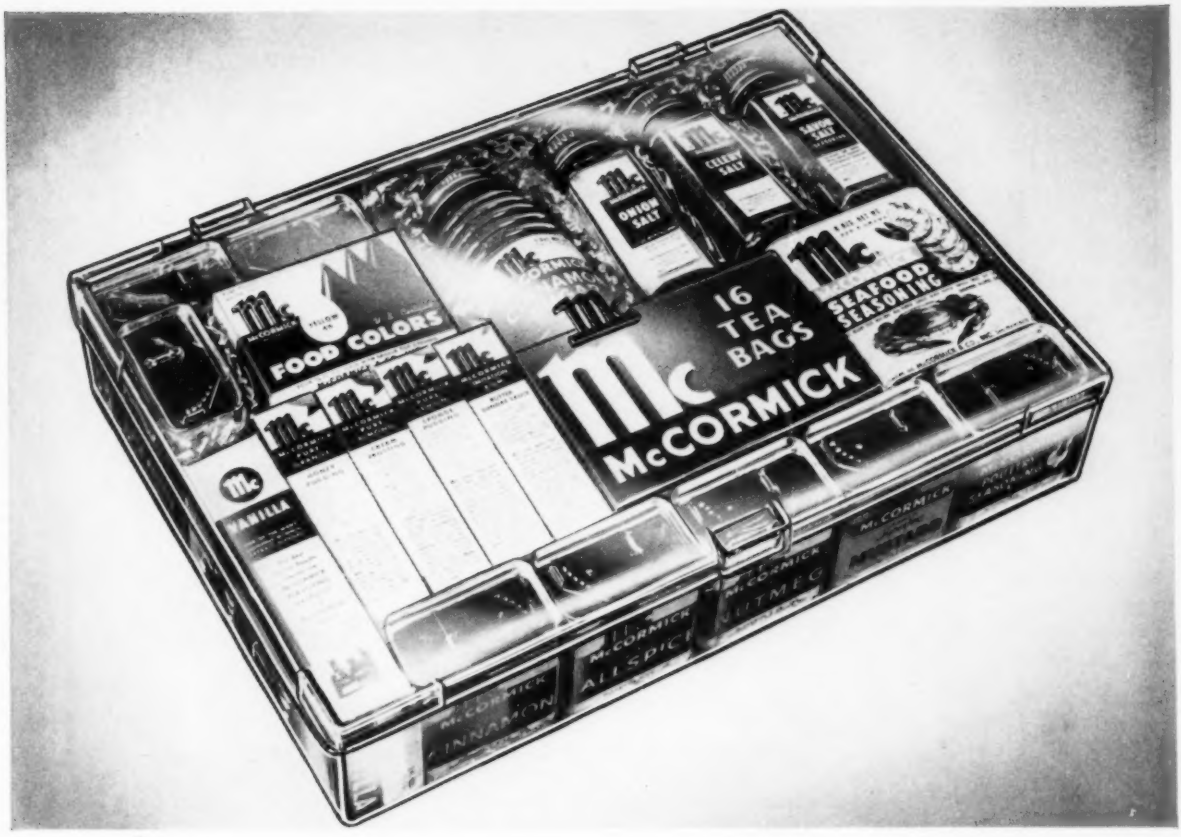
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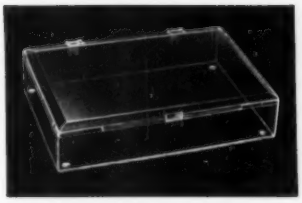
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DILTS MACHINE WORKS DIVISION
FULTON, NEW YORK





Goodwill COMES IN **TRI-STATE** PACKAGES

Mc Cormick & Company, Inc., Baltimore, distributes goodwill encased in Tri-State Rigid Plastic Boxes. Friends, suppliers and customers of the world's largest spice and extract house, receive this big gift box at holiday times and on various special occasions. Packed in the crystal-clear box are 20 Mc Cormick products . . . welcome in every kitchen. Equally as welcome is the large, sturdy Tri-State Rigid Plastic Box which has hundreds of handy uses in every part of every house.



Mc Cormick & Company uses our No. 700 box—9-3/16" x 13-1/8" x 2"—with tight-fitting brass-hinged lid. Regardless of what you may package there's a Tri-State Rigid Plastic Box to fit your product, build your sales, simplify your packaging operations. Choose from the world's largest assortment of stock sizes and shapes, or we'll mold to your specifications.

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Tell your sales-boosting package story with the name women know...

REYNOLDS WRAP

Watch what happens as the Reynolds Wrap Packaging Seal appears *now* on Cinderella Raisins and other famous-brand products. Watch... as more and more manufacturers climb on the bandwagon.

This is the first significant *packaging* identification in sales history. It applies only to the finest product protection known... aluminum. And it tells its story with the name that best evokes to all women the fresh-keeping power of foil ...Reynolds Wrap Aluminum Packaging!

However small on the package, that seal will loom larger and larger in the customer's eyes...because, to her, it's a guarantee of protected quality. Cinderella's shining raiment has been a shopping guide for years. But now the seal tells her *how* and *why* these raisins are so fresh... adds *conviction* to supreme eye-appeal. And in just the same way it can proclaim the freshness of foil-packed dehydrated products, margarine, cereals, butter, cheese.

Give your product this sales-boosting identification ...the Reynolds Wrap Packaging Seal. For more information, contact your nearest Reynolds Sales Office, or write to **Reynolds Metals Company,** General Sales Office, Louisville 1, Kentucky.



QUALITY PROTECTED WITH REYNOLDS WRAP ALUMINUM PACKAGING

Identify your package with the housewife's favorite food-keeper. Use the Reynolds Wrap Aluminum Packaging Seal!

Pioneers in Aluminum Foil Packaging

REYNOLDS ALUMINUM

SEE "MISTER PEEPERS," starring Wally Cox, Sundays, NBC-TV Network.


CINDERELLA
RAISINS
FOIL-FRESH
SPECIAL OFFER
SEE BACK PANEL...
Beautiful
CINDERELLA
COLORING
BOOK
Cinderella Raisins are unexcelled for quality — the finest you can buy.
Flavorful — full of natural taste of the sun-dried seedless grapes. Delicious to eat as they come from the carton.
Use generously in meat sauces, salads, cereals, pies, cakes, cookies, muffins, sandwich spreads, waffles and puddings.
Write for FREE Recipe Book today.
You will also like Cinderella Seeded Raisins, in the blue and gold foil package, and Cinderella Zante Currants in the green and gold foil package. Seeded Raisins are larger, best for holiday baking. Zantes are small, tart in taste, and best for cookies.
Also, try Blondie Raisins — golden blonde seedless raisins.
COMMENDED BY THE CONSUMER SERVICE BUREAU OF PARENTS' MAGAZINE
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SEEDLESS
RAISINS
Over 1000 FRESH Raisins
425 Grams
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CINDERELLA
RAISINS
PULL HERE TO SEE COMPLETE WRAP

sales pulling package for a pulley



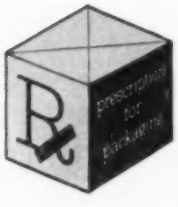
Ritchie-made Carton Encourages Display—Attracts Buyers

Yes, good packaging helps sell hardware items, too. The Chicago Die Casting Manufacturing Company demonstrates how it helps with this functionally designed and eye-catching carton.

Die-cut sides permit easy stacking for effective pyramid display of an even dozen Chicago Pulleys, from 1½-inch to 5-inch diameters. Makes it easy for customers to see and buy, protects the product, dramatizes the value.

And what is most important, helps sell Chicago Pulleys!

Need folding cartons, transparent packages, paper spools, set-up boxes, fibre cans? Ritchie can build them right to your specifications—or develop and design them to meet your requirements. Write today.



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Cleveland • Seattle • Jacksonville • Memphis



Practical and Profitable...Plastic Squeeze Bottles

Design possibilities are virtually limitless when you package with squeeze bottles blown from BAKELITE Polyethylene. An original, distinctive shape is just one of the eye-catching features that can be achieved.

Bottles like these can be made in every shade of every color. They can be printed, or label designs can be incorporated, along with special effects, such as stippling, cross-hatching, and other pleasing textures. Finishes can be glossy or frosty.

And bottles made from BAKELITE Polyethylene are truly functional packages. Gentle pressure dispenses their contents in a fine spray or drop by drop. They won't break. They retain flexibility, shape, and color, over long periods of contact with alkalies, acids, and most chemicals.

BAKELITE Polyethylene can be injection- or blow-molded. It is supplied in other useful forms for packaging—sheeting and film... coatings for paper, foil, and cloth... wax additives for superior grades of waxed paper... molded boxes, jars, closures, dispensing devices.

Why do we advertise a material that's in short supply? Because we know that it takes time to perfect your packaging ideas... Because we have a material worthy of your consideration, tough, flexible, easily molded, light in weight, resistant to chemicals. Because, by the time you have completed your development work, substantial progress will have been made with an extensive plant expansion program for BAKELITE Polyethylene.

Bottles for Seaforth Spray Deodorant produced by Elmer E. Mills Corp., Chicago, Ill.

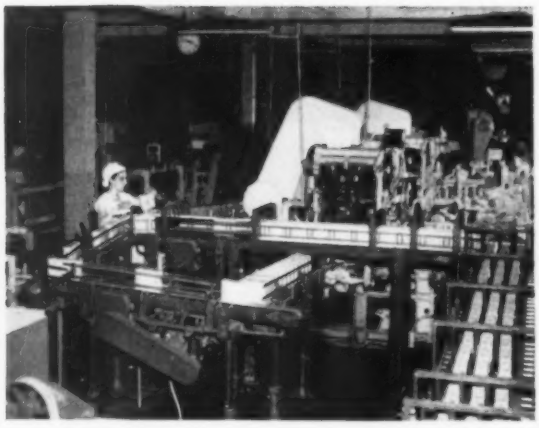
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Bakelite Company (Canada) Ltd., Belleville, Ont.





IT'S PABLUM FOR HIM–



Pneumatic's High-Speed Tight Wrappers applying labels to the Pablum packages at Mead Johnson's Evansville, Indiana, plant.

for PABLUM it's PNEUMATIC!

Pneumatic can proudly claim parentage, in large part, of the striking new PABLUM package. In all the mechanical operations of automatically forming, filling, sealing and tight wrapping this famous carton is a Pneumatic baby! That goes, also, for the whole PABLUM family of infant cereals.

You might say that Mead Johnson & Company are sold on Pneumatic machines. You might well say the same thing about most leading producers of packaged or bottled goods, without fear of contradiction. That's simply because experienced buyers of packaging equipment are in complete agreement on the engineering and operating superiority of Pneumatic machines. From drafting board to assembly floor each is planned and built to do its own special job at a "lower cost per container". The proof that they do just that is the fact they are first choice of America's most successful, most efficiently operated companies.

PNEUMATIC SCALE CORP., LTD., 82 Newport Ave., Quincy 71, Mass. *Also: New York; Chicago; San Francisco; Los Angeles; Seattle; Leeds, England.*

★PNEUMATIC

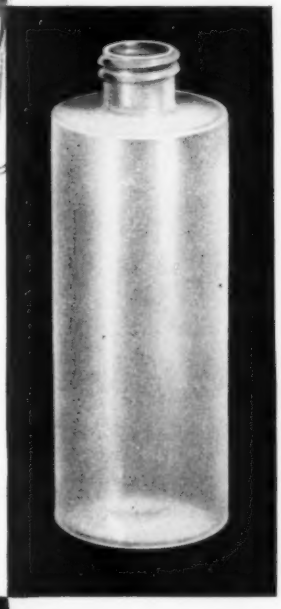
Packaging and Bottling Equipment



switch to the packaging that has changed the nation's buying habits!

MILLS PLASTIC*

BOTTLES



Manufactured under patents 2,515,093—2,579,390—2,579,399. Other patents pending.



You can quickly see why MILLSPLASTIC bottles have hit the buying public with such habit-changing power.

Three words—lightweight, unbreakable, versatile—tell the story. They mean greater safety and usefulness for the consumer, reduced shipping, breakage and spoilage costs for the cosmetic, drug and chemical manufacturer. Industrial users find that aside from these general advantages MILLSPLASTIC bottles have properties which make them the best possible containers for acids and a variety of chemicals.

The superior design and quality of MILLSPLASTIC bottles is evident in our two standard styles, Mills "Cylinder" available in 2-4-6-8 oz. and quart and gallon sizes; Mills "Oblong" in 2-4 oz. size. Both styles come in natural Polyethylene or your favorite color.

We also custom design MILLSPLASTIC bottles in sizes, shapes and colors to meet your special needs. Atomizers, tubing and closures are available in standard styles or can be custom made.

Great as the impact of MILLSPLASTIC bottles has been, we don't believe that the surface of their usefulness and versatility has been scratched.

Your product may have a use that can blaze new trails of profit when packaged in MILLSPLASTIC bottles. Why not talk it over with us or our sales agents today. • T. M. Reg.

ELMER E. MILLS CORPORATION

a subsidiary of

CONTINENTAL CAN COMPANY

2930 NORTH ASHLAND AVENUE • CHICAGO 13, ILLINOIS

Acme Steel Wire Stitching helps boost output

Alka-Seltzer solves packet problem with specially-designed Acme Steel stitching machine



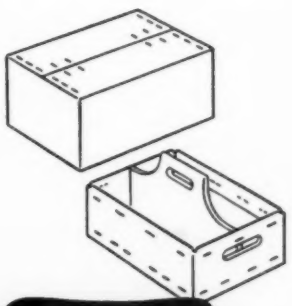
No headaches here with special four-headed Acme Steel Wire Stitchers stitching individually packaged Alka-Seltzer tablets to display cards for sale throughout the world.

Miles Laboratories, Inc., is increasing output of individually-wrapped Alka-Seltzer tablets . . . and Acme Steel field engineers helped make it possible.

Tablets are sealed air-tight in aluminum foil, and—when packet size was recently reduced to save on foil—there was danger that the stitching machines formerly used might puncture the air-tight compartments.

So Acme Steel engineers developed a four-headed wire stitcher that holds two Alka-Seltzer display cards at once, stitches 24 tablet packets in 3 rows to each card, does it so fast and well and safely that Miles Laboratories is replacing all old stitchers on this operation with the new Acme Steel model.

Whatever kind of carding, bagging or packaging problems you may have, chances are that Acme Steel Stitching Wire can help you. Call in your nearest Acme Steel field engineer. Or write to Acme Steel Products Division, Dept. MP-113, ACME STEEL COMPANY, 2840 Archer Ave., Chicago 8, Ill.



ACME STEEL

STITCH IT...STRAP IT...SHIP IT...SAFELY!



PHOTOGRAPH COURTESY ALEXANDER SMITH, INC.

They sell floor beauty to the nation

The floor covering industry has convinced people that interior decoration begins with floor beauty. Over the years this has been achieved by progressive, colorful styling of rugs, carpets, linoleum and other coverings – plus graphic presentation to consumers through catalogs, booklets, and folders. Much of this industry's finest promotion appears on Oxford quality papers because Oxford grades are fit foundation for pages that sell.



Oxford Papers

Help Build Sales

For your next letterpress job

Specify

OXFORD

Polar Superfine Enamel

OXFORD PAPER COMPANY
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POLAR SUPERFINE ENAMEL, finest of Oxford enamel papers, has unexcelled gloss, bright white color with no undertone and exceptionally pleasing appearance. It provides maximum smoothness and a superb printing surface. Polar Superfine is admirably suited for highest quality color process and black and white halftone reproduction.

IT PAYS TO ASK FOR — AND USE THESE FINE OXFORD AND OXFORD MIAMI PAPERS

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Mainefold Enamel	Wescar Satin Plate Offset
Mainefold Enamel Cover	Wescar Gloss Plate Offset
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Jacksonville, Fla.	Jacksonville Paper Co.
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Kansas City, Mo.	Bermingham & Prosser Co.
Knoxville, Tenn.	Louisville Paper Co.
Lincoln, Neb.	Western Newspaper Union
Little Rock, Ark.	Roach Paper Co.
Long Beach, Calif.	Blake, Moffitt & Towne
Los Angeles, Calif.	Blake, Moffitt & Towne
Louisville, Ky.	Louisville Paper Co.
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Phoenix, Ariz.	Blake, Moffitt & Towne
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Seattle, Wash.	Blake, Moffitt & Towne
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OXFORD PAPER COMPANY, *230 Park Avenue, New York 17, N. Y.* ★ **OXFORD MIAMI PAPER COMPANY,** *35 East Wacker Drive, Chicago 1, Ill.*

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to swing sales your way...

Use the extra "**sock**" of a LAMCOTE® "**showcase**" package



The glistening LAMCOTE window packs a powerful sales punch! Like a "showcase," it draws the eye to your product's selling features, glorifying its color, texture and appeal. Makes quick impact on buying desires . . . to *swing sales YOUR way!*

LAMCOTE enriches package printing, transforms apertures into sparkling display windows. We'll gladly create a LAMCOTE "showcase" package to add "sock" to your product. No obligation.

LAMCOTE PACKAGING DIVISION OF

ARVEY CORPORATION

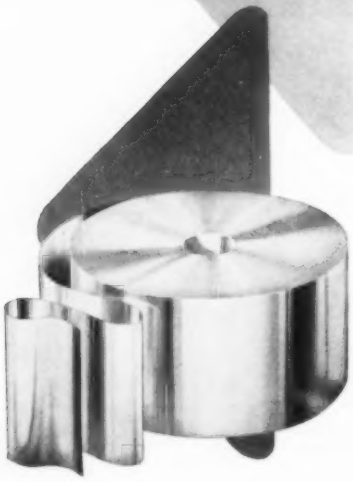
Since 1905

PLANTS:
3462 N. Kimball Avenue, Chicago 18
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Against the grey stones blaze the Tudor uniforms of the Yeoman Warders of Her Majesty's Tower of London. Among their duties is the guardianship of the Crown Jewels, normally kept in the Wakefield Tower.



Something to be guarded like Crown Jewels...



With food, candy, tobacco, the flavour and freshness of the product is its reputation. Something to be guarded like Crown Jewels! Venesta aluminium foil guards that reputation. While it keeps the good flavour in, it keeps harm out, and its brightness helps sell as no other wrapping can. Years of experience go into the manufacture of Venesta aluminium foil. Made under conditions of the strictest hygiene, and quality-controlled for purity, gauge and printing, it is *dependable* protection that matches the needs of the highest quality products.

VENESTA ALUMINIUM FOIL

A PRODUCT OF THE PACKAGING DIVISION

VENESTA

Venesta Limited, Vintry House, Queen Street Place, London, E.C.4, England. Cables · Venesta · London
T.A. 5366

Schoettle Case Histories:



true story of a

Purchasing Agent in a Tight Squeeze

CASE HISTORY #78 Here's one where the whole office ganged up to put the Purchasing Agent in a tight squeeze: Customer* had to get a packaged spotlight on the market quick . . . competition was already out and our customer had to have a smart new package . . . Sales Department had been slow, now wanted all kinds of speed . . . management was yelling for boxes . . . Such an order, at top speed, usually takes 6 to 8 weeks. We pulled the PA out of the tight squeeze by delivering in 3 weeks, *from scratch!*

CASE HISTORY #88 Our customer* (a large food chain), ordered new cake boxes. No hurry. Plenty of time. Then, suddenly, Purchasing Agent yelled he was in a tight squeeze: must have order completed on original date—but greatly increased quantity . . . Schoettle mill connections and facilities went to work . . . brought the full quantity to the customer right on time!

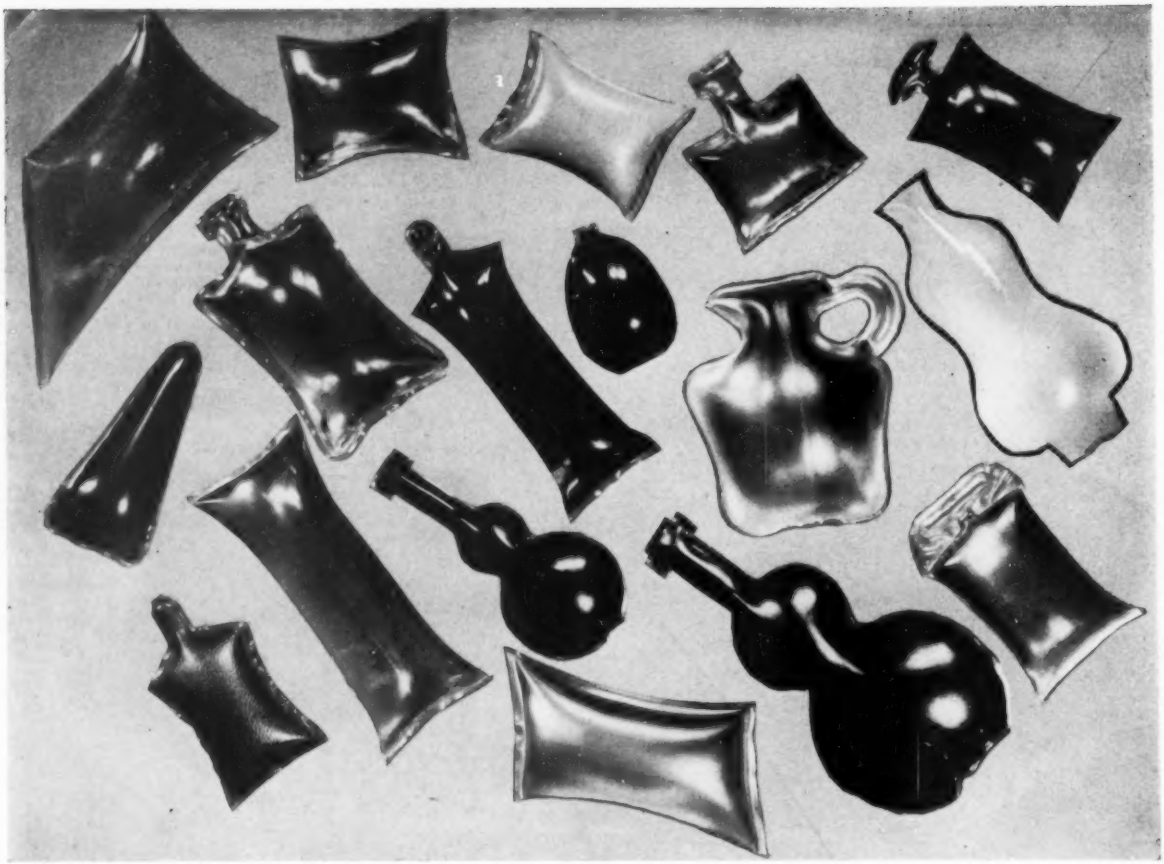
Schoettle can often do the "impossible" because of unusually excellent facilities and resources, the kind of cooperation that clicks on behalf of a customer who finds himself in a tight squeeze for quality boxes—fast! It will pay you to look into Schoettle service . . . it's saved many a Purchasing Agent many a grey hair!

*name on request

EDWIN J. SCHOETTLE CO.

533 NORTH ELEVENTH STREET • PHILADELPHIA 23, PENNA.

Designers and Manufacturers of Paper Boxes with Buy Appeal



The above illustrates just a few liquid or paste-filled packages and collapsible tubes in different shapes which have been produced by the RADO PROCESS.

We will pack your products in packages of your own design, decorate them with embossing, and print them in up to five colours.

RADO PACKAGING SYSTEM

British Patent Nos. 599,174, 599,183 and 675,073 U.S.A. Patent Nos. 2,530,400 and 2,517,027

PATENTS IN 36 OTHER COUNTRIES AND FURTHER PATENTS PENDING

TECHNOPOL LABORATORIES LIMITED

Tel: CLErkenwell 9452-9453 **212 St. John Street, LONDON, E.C.I, England** Cables: Telabor, London

Packaging Service Stations:

S. AFRICA
UNIVERSAL PLASTIC PACKS (PTY.) LTD.
43/44, Menteith House, Smith Street, DURBAN.

SWITZERLAND
GISIGER & CO. A.G.
Office: Pelikanstrasse 27 Zürich I
Tel: 051.27.24.47
Factory: Obfelden.

ITALY
GISIGER & PATRIZI S.p.A.
Piazza Santa Felicita 4
Firenze. Tel. 295040

AUSTRALIA
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Collingwood N.5., Victoria

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VERPACKUNGS-TECHNIK G.m.b.H.
Frankfurt a/M.
Holzhausenstrasse 13.

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(Algiers, Tunis, Morocco)
S. E. P. (Soc. d'Emballages Plastiques)
Office: 87 Rue Notre-Dame-des-Champs, PARIS 6e. Phone ODEON 71-33.
Factory: 24 Avenue de la Republique, CHATOU, France. Tel: 274.

AUSTRIA
Tupla Gesellschaft, Vienna IV., Wiedner Haupstrasse 8
Telephone: A 34067

BELGIUM
(Holland, Luxemb'g, Belgian Congo)
S. E. P. (Soc. d'Expansion des Matières Plastiques)
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Tel: 594.96.
Factory: 68-7 Rue de l'Agrafe, PRUSSELS.
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50¢ or $50—

when you're proud of your product

DISPLAY IT....SELL IT in Celanese* Acetate



IT'S THE FASTEST WAY TO SAY MORE FOR THE MONEY!

This Christmas, thousands of merchandisers will use sparkling clear acetate packages to show off their products. All year 'round, low-cost Celanese acetate creates glamour... demands attention... excites interest... sells candy, lingerie, toiletries, perfumes, combination sets... dime store items along with luxuries.

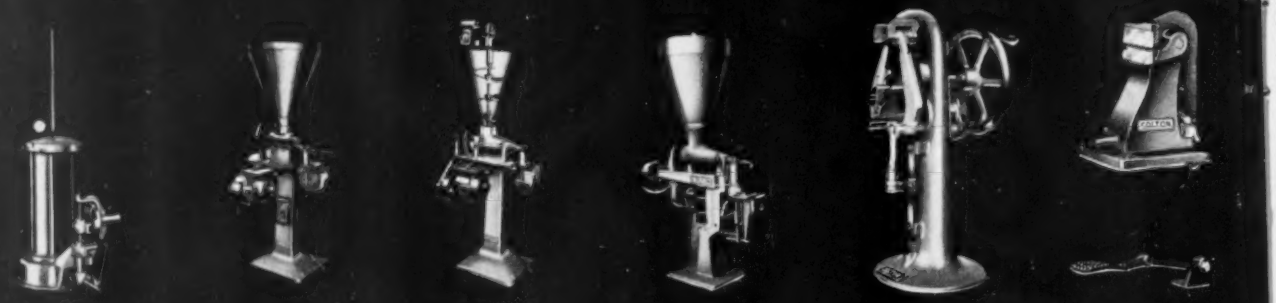
You can buy Celanese acetate transparent containers in a wide variety of stock and special sizes and shapes. For names of container manufacturers and suppliers, write

Celanese Corporation of America
Film Department 108-K
290 Ferry Street, Newark 5, New Jersey

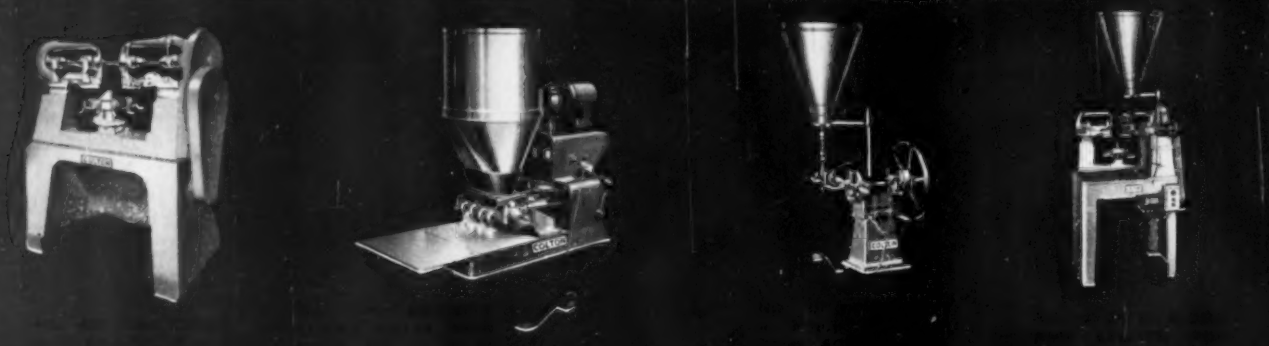
Canadian affiliate, Canadian Chemical Company, Ltd., Montreal and Toronto.

Celanese®
PACKAGING PLASTICS

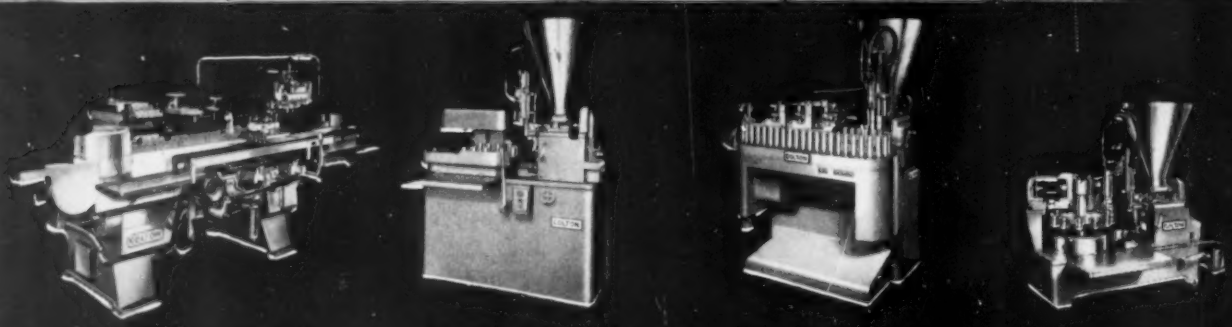
*Reg. U. S. Pat. Off.

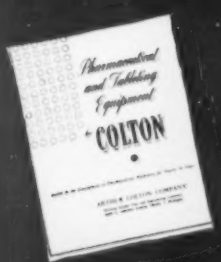


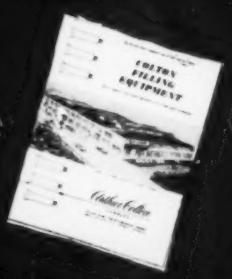
ONLY COLTON OFFERS A RANGE OF MACHINES COVERING EVERY MATERIAL FILLING REQUIREMENT, FROM LIQUIDS TO HEAVY ABRASIVE PASTES



COLTON'S BRILLIANT NEW LINE INCLUDES THE RIGHT MACHINE FOR SPEED AND ECONOMY ON EVERY FILLING JOB









ALROL Processes ALUMINUM from INGOT to FOIL

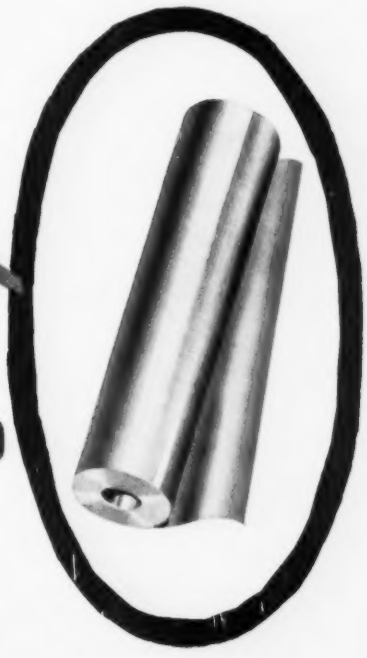
We are a Canadian firm, producing aluminum foil from the ingot, with every phase of production in our own plant.

As converters for many years, we know this over-all control is vital to the manufacture of quality foil.

There are no aluminum shortages in Canada—our raw material stocks are adequate and we can give 3 week delivery at all times on foil orders.

Our 3 week delivery and close proximity* to American demand make Aluminum Rolling Mills Limited a logical primary or alternative source for aluminum foil.

Immediate Consideration to All Inquiries.



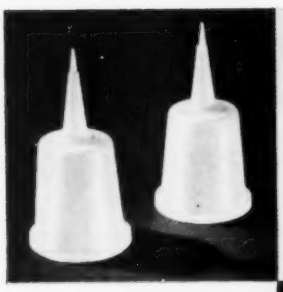
*Our plant at Cap-de-la-Madeleine, Quebec is located less than 150 miles from the American border and within 24 hours rail distance of the industrial centres of the eastern United States.

ALUMINUM ROLLING MILLS LIMITED

Executive offices & plant: CAP-DE-LA-MADELEINE, QUE., CANADA

Cable addresses: "LAPACO" and "ALROL"

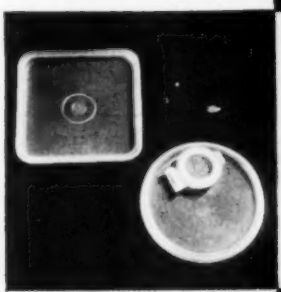
ALROL





NOBODY HAS AS MUCH EXPERIENCE AT MOLDING POLYETHYLENE AS TUPPER!





Tupper Seals are air and liquid-tight flexible covers. The famous Pour All and Por Top covers are designed for easy dispensing. They are made in sizes to fit all Tupperware containers.

The logical molder for you to consult regarding that product or package of yours which is to be made of polyethylene is Tupper. Tupper has done more than any other molder to make molded polyethylene a practical reality.

Aside from having designed, patented, and promoted successful seals, closures, and dispensers for polyethylene containers, the Tupper Corporation has vast experience in *every phase* of polyethylene packaging and polyethylene injection molding. This experience will be of major importance in improving your product, in reducing your costs, when Tupper goes to work for you.

Tupper's combination of experience, technical ingenuity, and the most modern equipment is at your service for the custom molding of your product in polyethylene. You can do no better than the best ... and the best at molding polyethylene is Tupper!







When equipped with Tupper Seals, Tupper Canisters, Sauce Dishes, Wonder Bowls, Cereal Bowls and Funnels in various sizes are the most versatile reusable containers you have ever seen.

TUPPER!
TRADE MARK

TUPPER PRODUCTS ARE FULLY PROTECTED

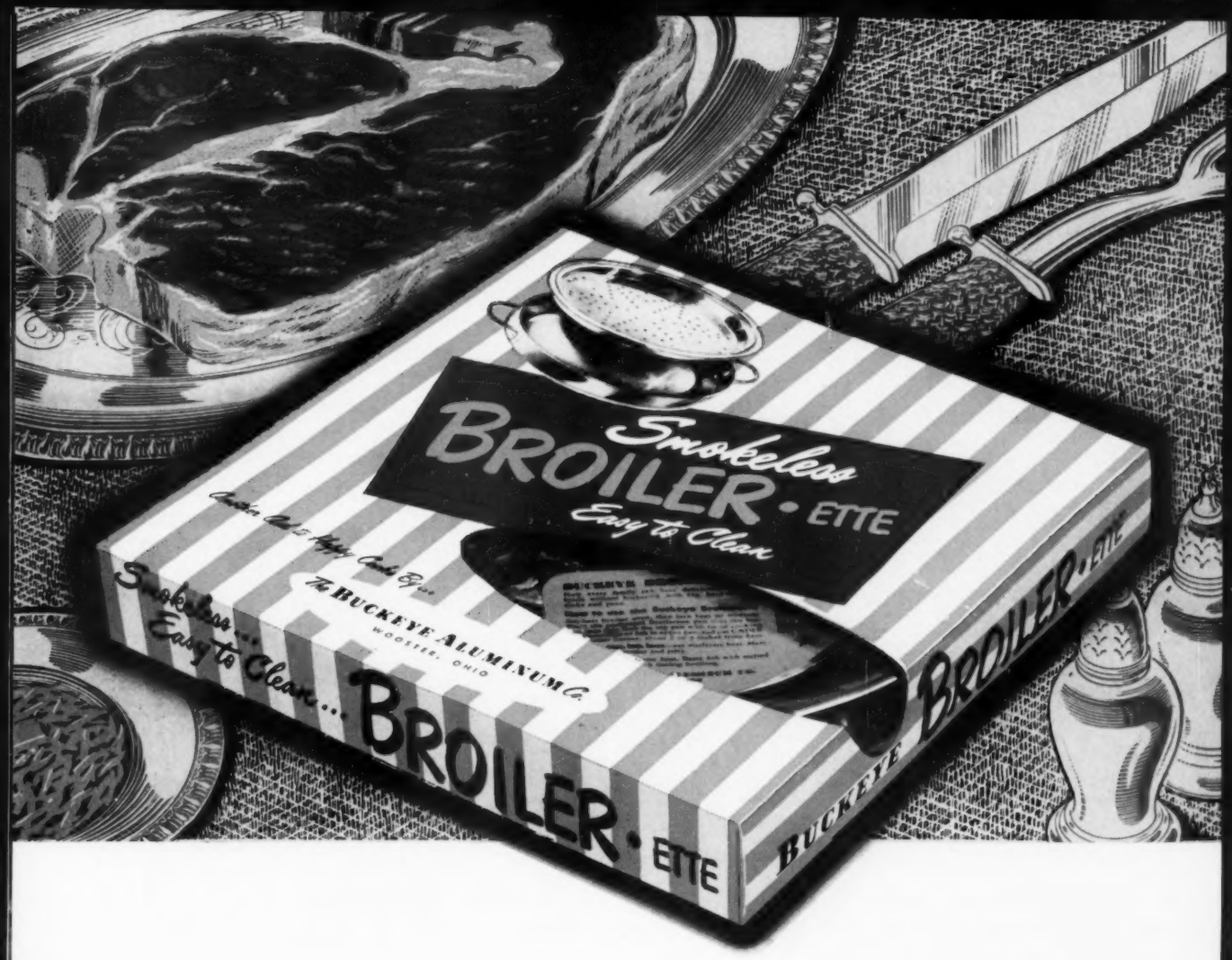
About 150 United States and foreign patents and patents applied for, plus numerous trademarks and copyrights, cover the design and manufacture of the various types of Tupper Seals and other Tupper Products. Unauthorized manufacture of items covered by Tupper patents will subject infringers to prosecution.

TUPPER CORPORATION

Manufacturers of — CONSUMER, INDUSTRIAL, PACKAGING AND SCIENTIFIC PRODUCTS

Factories, Laboratories and Sales Offices:
Farnumsville, Mass., Orlando, Fla., L'Epiphanie, P.Q.
Showrooms: 225 Fifth Ave., N. Y. C.

Address all communications to: Dept. MP-11





DISPLAY TEAMWORK combines a picture, an attractively lettered trade name, and an inviting glimpse of the product itself in this attractive red, blue, and yellow carton for The Buckeye Aluminum Company's BROILER-ette. The elliptical window blends with the overall design to produce a merchandising carton typical of our complete and coordinated PLANNED PACKAGING facilities.

THE OHIO BOXBOARD COMPANY 1903 1953 50th ANNIVERSARY

THE OHIO BOXBOARD CO.

"Home of PLANNED PACKAGING"

RITTMAN • OHIO

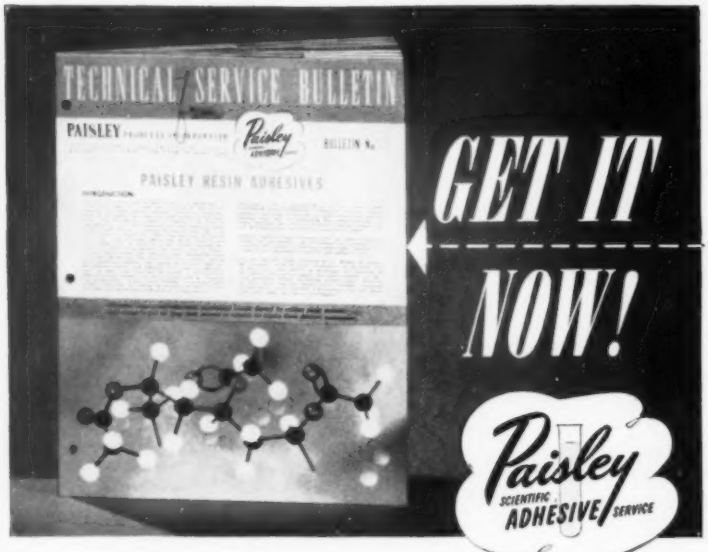
Manufacturers of paper board, folding boxes, corrugated and fibre shipping containers, and converted specialties

SALES OFFICES: RITTMAN, O. • AKRON, O. • CUYAHOGA FALLS, O. • CLEVELAND, O. • COLUMBUS, O. YOUNGSTOWN, O. • CINCINNATI, O. • TOLEDO, O. • MANSFIELD, O. • CANTON, O. • CAMBRIDGE, O. DETROIT, MICH. • PITTSBURGH, PA. • ERIE, PA. • NEW YORK, N.Y. • CHICAGO, ILL. • EDWARDSVILLE, ILL.

WHEN *Split Second* PACKAGING IS ESSENTIAL..



USE *Paisley* RESIN ADHESIVES





Think of having at YOUR command, stable *laboratory controlled,* prepared Liquid Resin Adhesives that *set in split seconds* . . . timed to match machine motions with exacting mechanical precision! They will give you an entirely new conception of speed and efficiency in any packaging, labeling, sealing, fabricating or manufacturing operation.

All users of Resin Adhesives *need* the new Paisley Resin Adhesive Bulletin No. 23. It will give you practical, *usable* information never before available to Resin Adhesive users. Valuable technical aspects are explained in language any layman can understand. No cost or obligation is involved. Be sure to use your company letterhead when writing for your copy.

TEAR OUT . . FASTEN TO LETTERHEAD AND MAIL TODAY!

PAISLEY PRODUCTS INC., 1770 Canalport Ave., Chicago 16, Ill.

Gentlemen: Without obligation, please send me the new Paisley Technical Service Bulletin No. 23.

☐ We have a special Gluing problem. Send us your Adhesive Operation Data Sheet. (You fill in and return to us for Laboratory recommendation.)

FIRM_____ BUYER_____

STREET_____ CITY_____ STATE_____

PAISLEY PRODUCTS INCORPORATED

Division of MORNINGSTAR, NICOL, INC.

1770 CANALPORT AVENUE, CHICAGO 16, ILLINOIS ★ 630 WEST 51st STREET, NEW YORK 19, NEW YORK

SALES OFFICES IN TWENTY-FIVE PRINCIPAL CITIES

Manufacturers of Glues · Pastes · Resin Adhesives · Cements and related Chemical Products

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SELL ON SIGHT



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* *CELLOPHANE is the registered trade mark of British Cellophane Limited, in the following countries: Great Britain, Australia, Ceylon, Cyprus, Denmark, Eire, Gibraltar, Hong Kong, Iceland, India, Jamaica, New Zealand, Pakistan, Northern Rhodesia, Southern Rhodesia, Trinidad and Tobago, and the Union of South Africa.*

it will pay you to package your spices in R.C. metal top FIBRE CANS



Here are the facts . . .

- **SMALLER INVENTORY**—R. C. Fibre Cans can be ordered in any quantity—however small. It isn't necessary, because of expensive lithography, to restrict your orders to 25,000 or 100,000 lots. No need to overstock on a slow-moving spice item that will take years to use up.
- **MINIMUM DANGER OF OBSOLESCENCE**—With R. C. Fibre Cans you *order when and as you need them.* This means an up-to-date can—labels that can be easily and inexpensively revised.
- **FASTER SERVICE**—Quick, dependable delivery keynotes every R. C. order. R. C.'s broad facilities and thorough-going experience in the manufacture of fibre containers is enhanced by freedom from the usual material shortages and cutbacks—plus four strategically located plants.
- **DURABLE, SMART-LOOKING DESIGN** — Product protection comes *first* in R. C. Packaging. Rugged "shelf-proofed" design is combined with attractive, up-to-date design.
- **LOWER COST**—Less to produce—less to ship—always on hand without jamming up your valuable warehousing space.
- **COMPLETE VARIETY OF SHAPES AND SIZES**—Round, square, oval, or oblong—with any type of closure to fit your individual needs. Find out today how R. C. Fibre Cans will save you money, time, space and production headaches.

"CAN-gineers to the Packaging Industry"

R·C· CAN COMPANY

R.C. CAN CO. The Stamp of Quality ST. LOUIS, MO.

MAIN OFFICE and Factory Branch Factories: **9430 Page Blvd., St. Louis 14, Mo.** Arlington, Texas; Rittman, Ohio; Turner, Kan.

SALES OFFICES:

Atlanta 3, Ga., L. C. MORRIS CO., 1125 Spring Ave., N.W. • Denver 9, Colo., E. F. DELINE CO., 224 W. Alameda • Los Angeles 15, Calif., CAN SUPPLY CO., 1006 W. Washington Blvd. • Memphis 3, Tenn., S. W. SCOTT, 608 McCall Bldg. • Minneapolis 1, Minn., W. L. BENNETT, 126 S. Third St. • New Orleans 12, La., C. E. DOBSON, 1003 Carondelet Bldg. • New York City, N. Y., R. C. CAN CO., 225 W. 34th St.

Pocket pack keeps tobacco fresh...



Coating of "Alathon" helps preserve moisture of tobacco in handy pouch...insures longer shelf life

The United States Tobacco Co. wanted to distribute its cut pipe tobacco in a convenient package that the consumer could slip into his pocket. But it had to be a package that would hold in moisture—to keep the tobacco from drying out while it traveled from manufacturer to consumer.

The package developed to do the job is made of 50# bleached sulphate, coated with approximately 13# of Du Pont "Alathon," polyethylene resin, laminated to a .00035" aluminum foil. "Alathon," with its low rate of water vapor transmission, supplements the moisture barrier action of the foil . . . helps protect the freshness of the tobacco and insures greater shelf life. Light in weight and more compact than previously used packages, the pouch is handy for the smoker. And the strength and flexibility of "Alathon" help give the package good fold characteristics.

Perhaps "Alathon"—with its unique combination of properties—can help you solve a packaging problem. "Alathon" stays flexible in temperatures ranging from tropic heat to 70°F. below zero. It's tough, strong, non-sticky . . . resists most acids, alkalies, greases and oils. Consider using "Alathon" in multi-ply or single-ply bags, pouch bags, chipboard containers and trays, fiber drums and cartons, or corrugated boxes.

*REG. U.S. PAT. OFF.

DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY
Polychemicals
DEPARTMENT
PLASTICS • CHEMICALS

WRITE FOR FREE BOOKLET

describing the properties and uses of "Alathon" in the packaging field, or simply mail this handy coupon. We'll gladly put you in touch with sources of supply for packaging materials coated with "Alathon."

E. I. du Pont de Nemours & Co. (Inc.)
Polychemicals Dept. 5111. Du Pont Bldg., Wilmington 98, Del.

Please send me the new booklet on packages using coatings of "Alathon."

Check type of package most interested in: Multi-wall bags ( ). Single-ply bags ( ). Pouch bags ( ). Overwraps ( ). Fiber drums & cartons ( ). Chipboard containers & trays ( ). Corrugated boxes ( ). Other ( ).

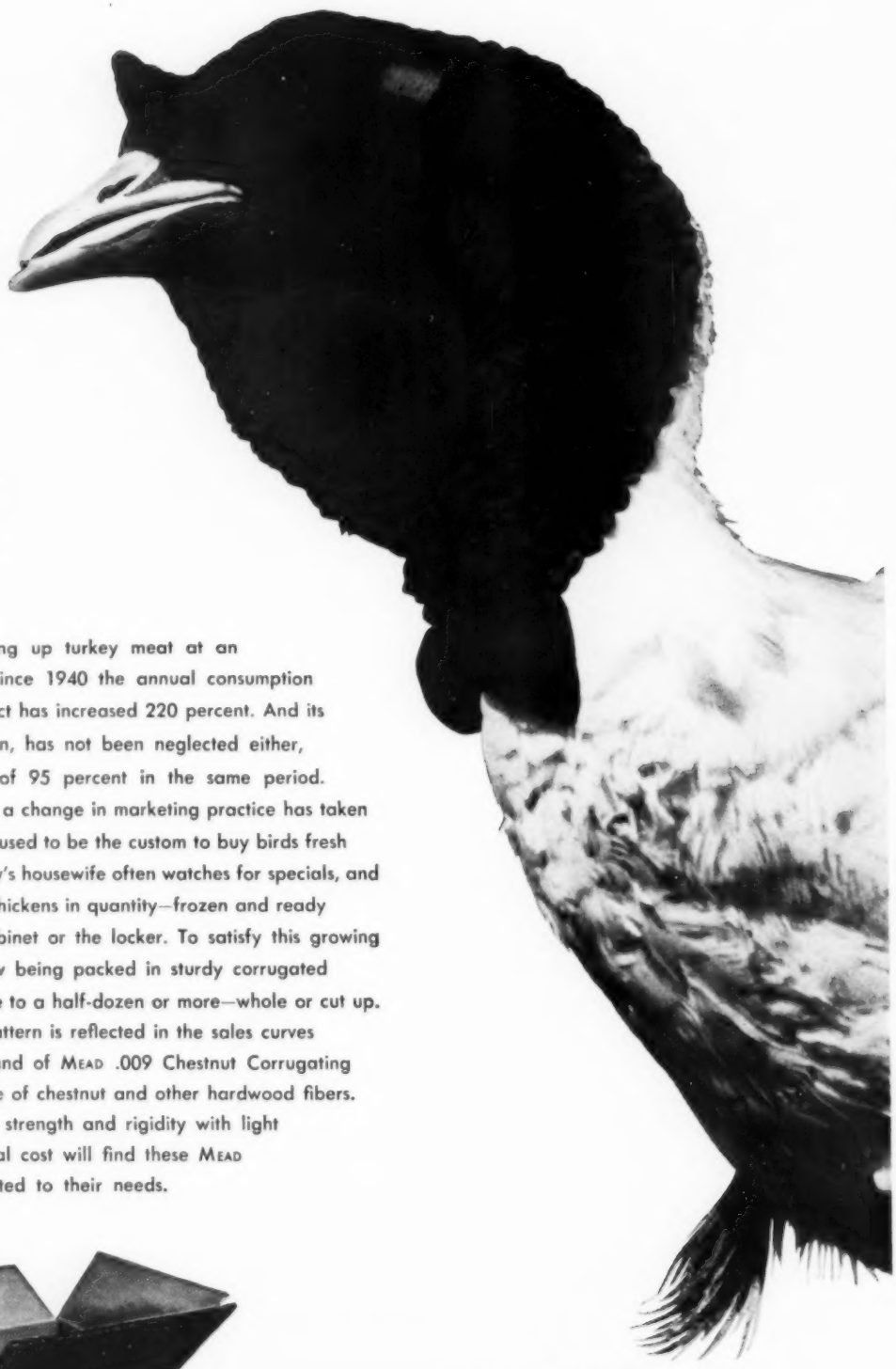
*Name*_____

*Title*_____

*Company*_____

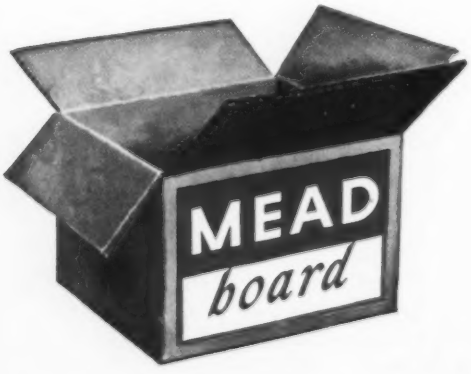
*Address*_____

*City*_____ *State*_____



TURKEY GOBBLE

Americans are gobbling up turkey meat at an unprecedented rate. Since 1940 the annual consumption of this one food product has increased 220 percent. And its first cousin, the chicken, has not been neglected either, showing an increase of 95 percent in the same period. During those 12 years, a change in marketing practice has taken place, too. Whereas it used to be the custom to buy birds fresh killed and singly, today's housewife often watches for specials, and buys her turkeys and chickens in quantity—frozen and ready for the home food cabinet or the locker. To satisfy this growing demand, they are now being packed in sturdy corrugated cases holding from one to a half-dozen or more—whole or cut up. This new marketing pattern is reflected in the sales curves of MEAD Kraft Liner and of MEAD .009 Chestnut Corrugating Medium which is made of chestnut and other hardwood fibers. Fabricators who want strength and rigidity with light weight and economical cost will find these MEAD products perfectly suited to their needs.



Mead Board is sold direct by

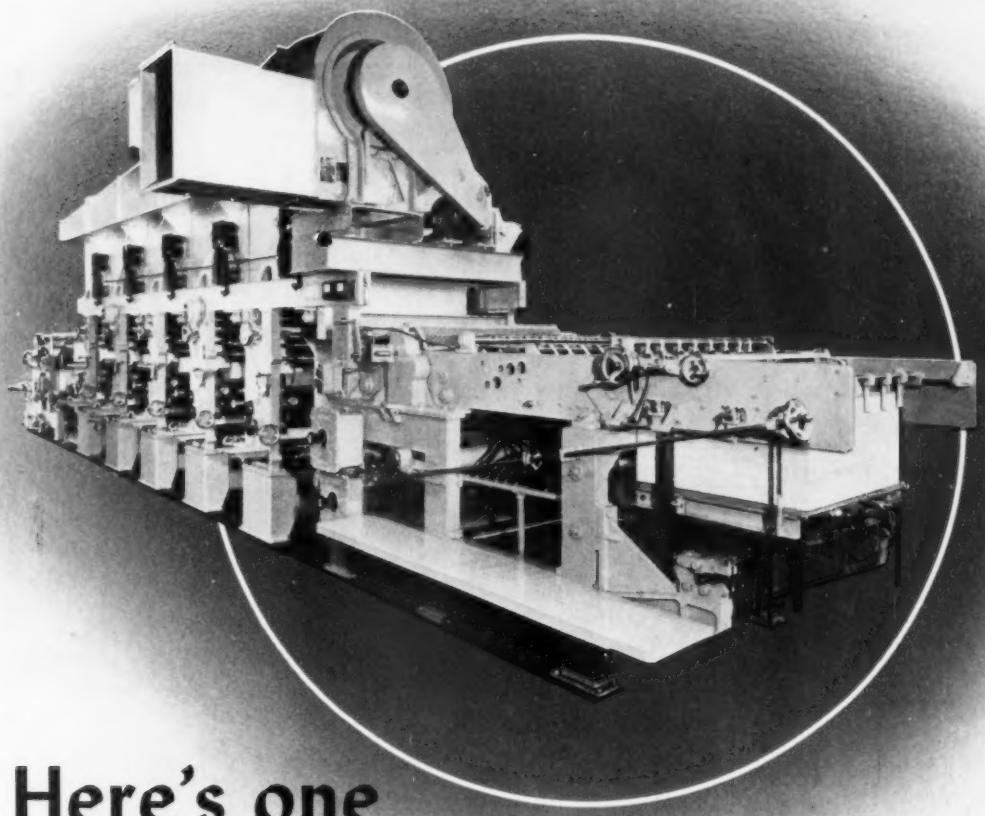
MEAD BOARD SALES, INC.

3347 Madison Road, Cincinnati 9, Ohio

NEWARK 2, N.J.
10 Commerce Court

LYNCHBURG, VA.

CHICAGO 30, ILL.
6124 No. Milwaukee Ave.



Here's one press you can't buy second-hand!

Every original owner still has his ATF-Klingrose rotogravure press. Here's why...

Every ATF-Klingrose rotogravure press ever built is still turning out high volume, low cost rotogravure work for its owner—the kind of work that prompted its purchase in the first place. And the majority of "new" ATF-Klingrose customers have reordered since!

Now, with the addition of a new high-speed sheeter and stream delivery, the value of these presses is greater than ever. ATF-Klingrose presses produce up to 15,000 accurately cut and jogged printed sheets per hour.

Every ATF rotogravure press is "production-proved" to performance specifications *before* delivery, using *your* engraved cylinders, *your* inks and *your* web material.

If you've been considering rotogravure for your own plant, you owe it to yourself to get complete facts on the *one* rotogravure press you can't buy second-hand. Write today to AMERICAN TYPE FOUNDERS, *a subsidiary of Daystrom, Inc.,* Mt. Vernon, N. Y.



Cascade "gravity flow" eliminates the splashing and the airbells that leave minute un-inked areas. Only ATF rotogravure presses have Cascade Inking!



ATF's exclusive Pendulum action impression provides constant uniform web tension whether press is printing, idling or standing. Absolutely eliminates slack web.

Better, More Profitable Printing from the Widest Line of Processes

GRAVURE . . . LETTERPRESS . . . OFFSET

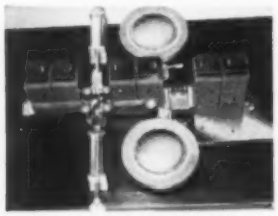
ATF

Tapes 1600 deals a day



(all by herself!)

See how she does it? She simply drops the two bottles into the cut-out packaging board, slides the "Scotch" Brand Acetate Fibre Tape No. 700 around them and it's done. No expensive equipment. Yet she turns out 1600 combination deals a day at Bonne Bell, Inc., Lakewood, Ohio. And 3 other women who work with her do the same thing. Total for four women: 6400 units every 8 hours.



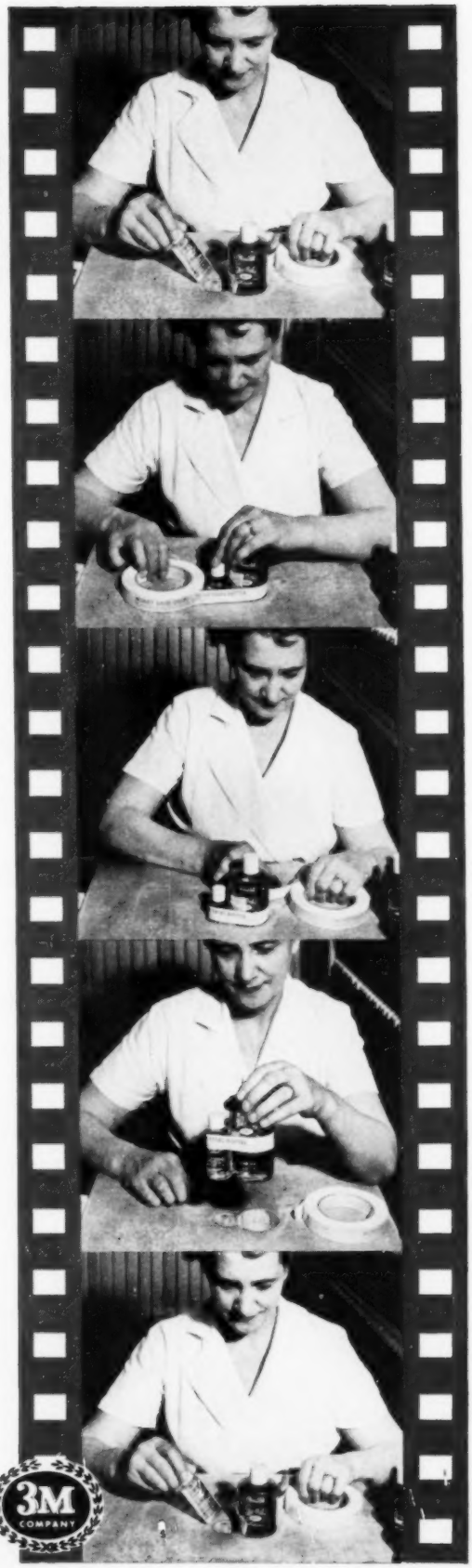
Speedy automatic machines also available

Developing tape applicators, jigs and machinery is the job of a 3M Service Representative. He works with you, helps you find the right dispenser and the right "Scotch" Brand Pressure-Sensitive Tape (like the one used by Bonne Bell that does a banding *and selling function*) to do *your* job better in less time, at less cost.

Put him to work for you. There's no charge or obligation. Let him show you how you can save with "Scotch" Brand—the world's most complete line of pressure-sensitive tapes and tape dispensers. Write 3M Company, Dept MP—113, St. Paul 6, Minnesota. Do it *now*, while you're thinking of it.

SCOTCH BRAND
Pressure-Sensitive Tapes

Tape does it quicker, better, cheaper!



3M COMPANY

The term "Scotch" and the plaid design are registered trademarks for the more than 300 pressure-sensitive adhesive tapes made in U.S.A. by Minnesota Mining & Mfg. Co., St. Paul 6, Minn.—also makers of "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. General Export: 122 E. 42nd St., New York 17, N.Y. In Canada: London, Ont., Can.

BARTELT

"Machinery for Creative Packaging"

Die-Cut Web

the Bartelt Machine will die-cut a web, make a bag, fill, fold and seal!



Liquid Fill

the Bartelt Machine can package liquids. Special feature...can be steam cleaned!



Stand-up Pouch

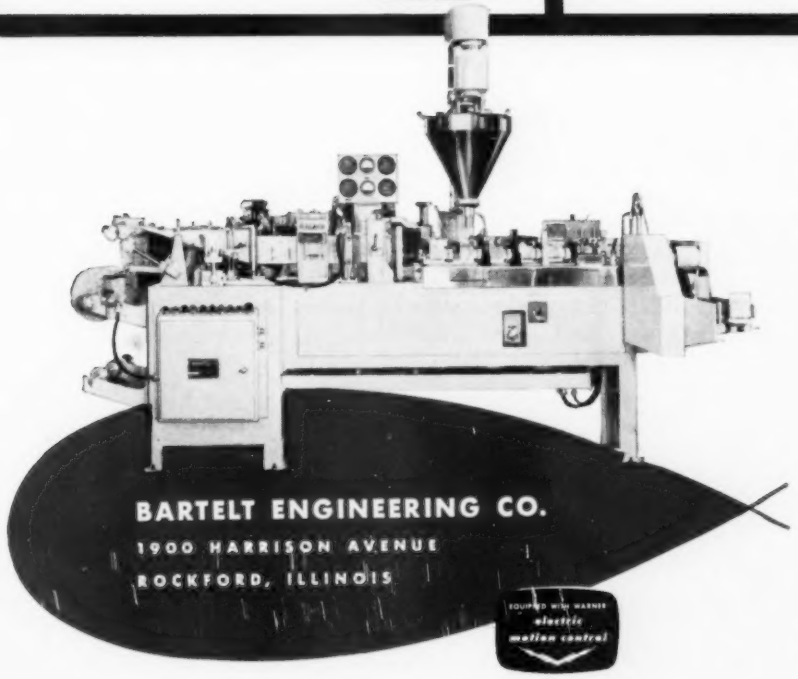
the Bartelt Machine will make a flat-bottom stand-up package for liquids!



Custom Made

the Bartelt Machine will make a multi-wall bag and fill it!





BARTELT ENGINEERING CO.
1900 HARRISON AVENUE
ROCKFORD, ILLINOIS

EQUIPPED WITH WARNER *electric* *motion control*

Colorful, individual packages which effectively display your product can be made automatically and economically on Bartelt Packaging Machines. Bartelt Packagers make the bag from a roll of paper, film, or foil; fill by count, volume, or special feeder; and heat seal accurately and safely. If you can use a pouch style, heat-sealed package, our machines may be adapted to your needs. Send us your packaging problem today.

"Machinery for Creative Packaging"

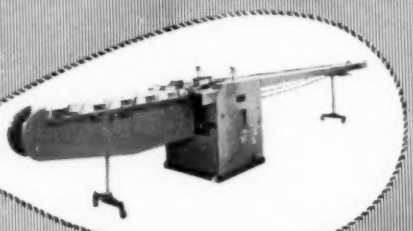
3 Types of CECO AUTOMATIC CARTONERS

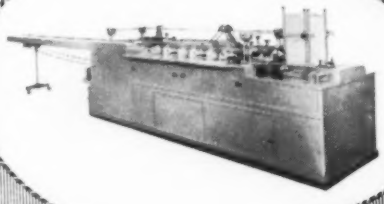
TRADE MARK REG. U. S. PAT. OFF.

... each in the LOW PRICE RANGE

CECO Model 3901

The most versatile and lowest cost adjustable carton glue sealer in the packaging business. Hundreds in successful operation for large and small concerns all over the world. Carton set-up and product insertion are manual. Cartons are closed automatically.



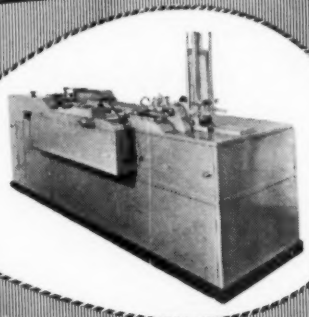


CECO Model 40

This low-cost adjustable cartoner provides automatic features heretofore available only on very expensive equipment. Sets up and closes cartons automatically. Product is manually inserted.

CECO Model 45

A fully automatic adjustable cartoner at unbelievably low cost. Sets up cartons, inserts single or multiple products, and closes cartons, all automatically. No other machine at any price offers such versatility, low-cost operation, and economy of upkeep.



Quick Delivery

Prefabricated standard components and modern assembly lines permit delivery of some standard models within two weeks.

All CECO Cartoners are adjustable quickly without special tools by unskilled help for a wide range of carton sizes. Economical for long or short runs. All models can glue-seal both ends, or seal one end and tuck the other, or tuck both ends. CECO Cartoners produce clean, square, stronger cartons at less cost and with less floor space. A CECO Cartoner generally pays back its low cost in less than a year. Let us prove it. Send for details.

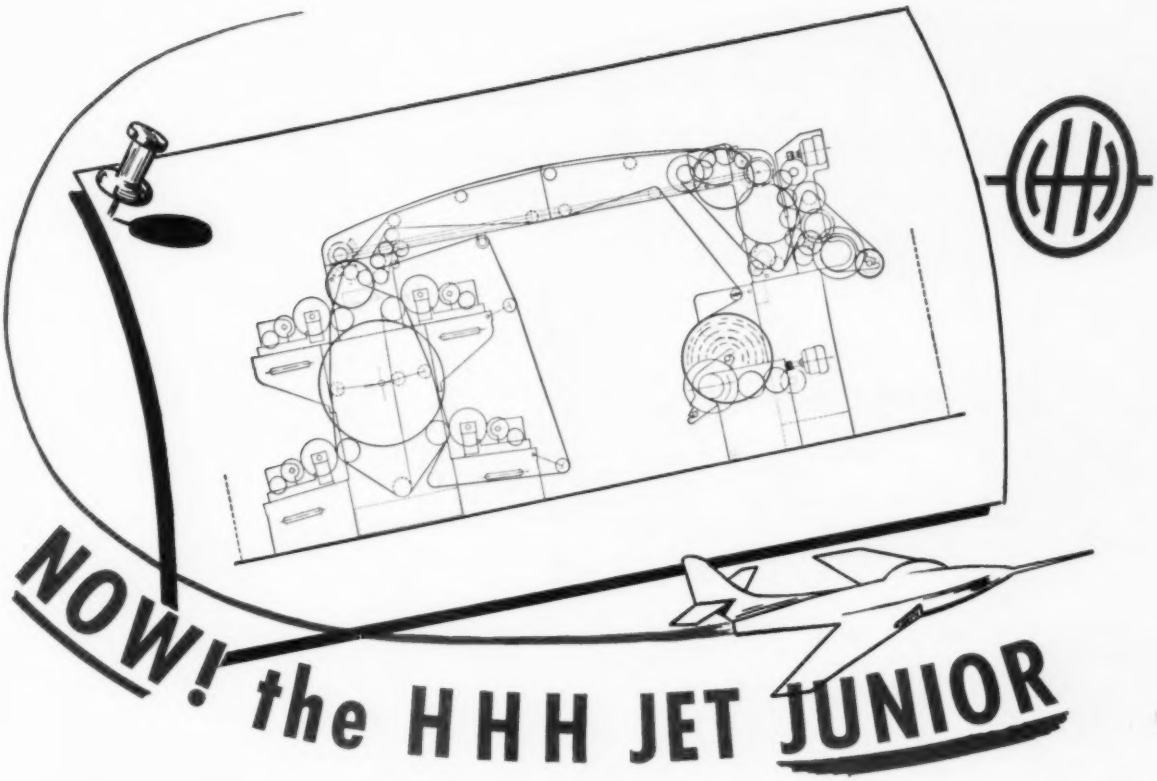


CONTAINER EQUIPMENT CORPORATION

MEMBER, PACKAGING MACHINERY MANUFACTURERS INSTITUTE

78-88 LOCUST AVENUE, BLOOMFIELD 2, N. J.

PHILADELPHIA • BOSTON • CHICAGO • DALLAS • JACKSON
NEW YORK • SAN FRANCISCO • SAVANNAH • TORONTO



NOW! the H H H JET JUNIOR

HIGH-SPEED, MULTICOLOR FLEXOGRAPHIC SPECIAL PURPOSE PRINTING PRESS (Aniline) DESIGNED TO FIT LIMITED BUDGETS

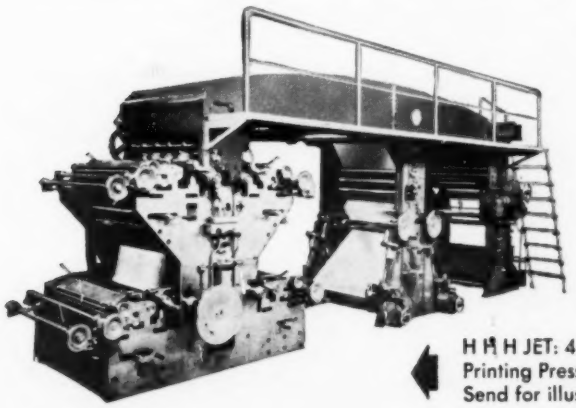
For those converters who *DO NOT* require a large versatile all-purpose press such as the H H H JET, capable of printing on a wide variety of surfaces, we highly recommend the new *H H H JET JUNIOR.*

Designed for top quality printing in two to six colors on Cellophane, Paper or such Film as Polyethylene, the JET JUNIOR meets a long felt want. Low in price, economical to operate, capable of high-speed *quality* production, here is the press that fits limited budgets yet assures utmost printing efficiency!

Backed by a full guarantee of long, satisfactory service, the H H H JET JUNIOR merits the investigation of every converter who seeks TOP VALUE for his money. Send for the facts, TODAY! Again, Heinrich leads the field in value!

FEATURES AND SPECIFICATIONS

- Greatly improved five-roll, double "S" feeding system. Perfect register assured
- 36 inch drying distance between colors (up to 52 inches on a six-color frame)
- Semi-automatic web splice at double friction rewinder. Electric controls leave both hands of operator free for actual splice
- Built-in extra large cooling and remoistening cylinder
- Reverse printing system . . . prints web or tube material on both sides or applies heat seal on web opposite printing
- Frictionless; vibrationless; finger-tip controls
- One side parallel adjustment of all fountain and transfer rollers
- Hydraulic plate cylinder lift



H H H JET: 4-color high-speed Flexographic Printing Press. Also in 5 and 6-color models. Send for illustrated brochure.

WINDMOELLER & HOELSCHER
SINCE 1869

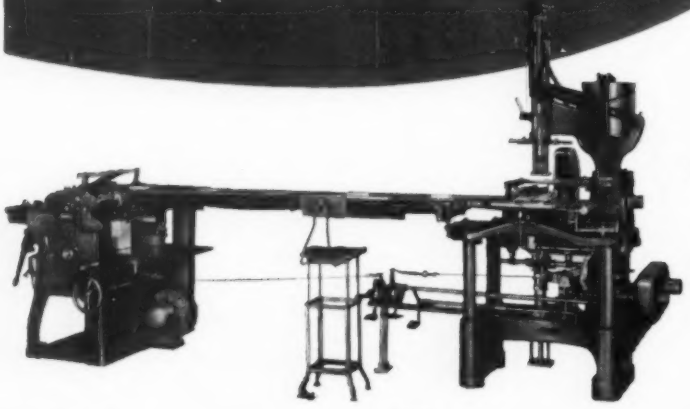
H. H. HEINRICH
COMPANY
111 — EIGHTH AVENUE, NEW YORK 11, N. Y.

Improved Dexterity in MECHANIZED PACKAGING...



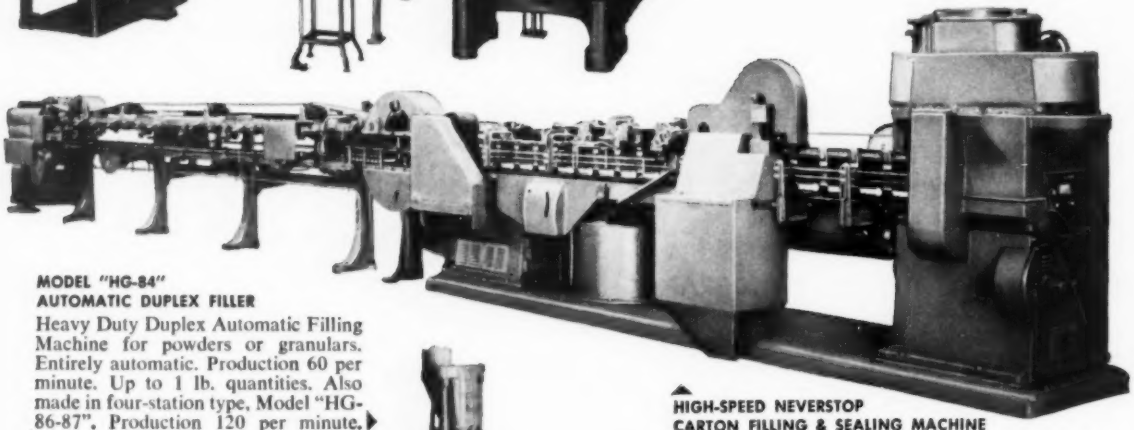
MODEL "EG" UNIVERSAL FILLER

Newest design. Fully streamlined. Fills by gross weight or by packing or by measurement. Handles powders, granulars or pastes. Various types of containers. ¼ oz. up to 5 lbs. or more. Production 15 to 30 per minute.



STOKESFEED PAPER BOX MACHINE

A complete paper box gluing, feeding and wrapping unit. Made in two sizes—Model "B" and Model "H". Completes up to 40 boxes per minute. Only one operator required. MODEL "B"—maximum: 20" x 15" x 4"; minimum: 6" x 4" x ½". Model "H"—maximum: 15" x 10" x 2¾"; minimum: 4" x 1¾" x ½".

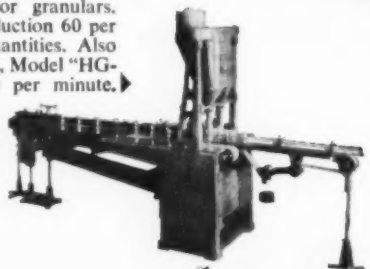


MODEL "HG-84" AUTOMATIC DUPLEX FILLER

Heavy Duty Duplex Automatic Filling Machine for powders or granulars. Entirely automatic. Production 60 per minute. Up to 1 lb. quantities. Also made in four-station type, Model "HG-86-87". Production 120 per minute.

HIGH-SPEED NEVERSTOP CARTON FILLING & SEALING MACHINE

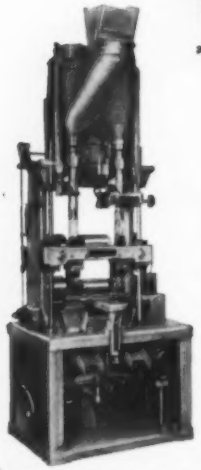
For free-flowing products. Feeds, fills and seals cartons, both top and bottom, in one continuous operation. Cartons 5 15/16" x 3 7/16" x 1 3/16" to 8½" x 6" x 2⅛". 60 to 200 or more per minute. One operator.





AUTOMATIC STRETCHRAP PACKAGING MACHINE

For wrapping odd shapes of articles or pieces, smoked meats, sausage, toys, etc. with heat sealing "Pliofilm". One operator required. Production 12 to 15 per minute.



STOKESWRAP AUTOMATIC PACKAGING MACHINE

Equipped with auger feed. Forms, fills and heat-seals the package, taking printed or unprinted web from roll stock. Volume to 56 cubic inches or 1 lb. 50 to 120 packages per minute.

...ENGINEERED BY STOKES & SMITH CO.

STOKES & SMITH CO.

FRANKFORD, PHILADELPHIA 24, PA.

Pacific Coast: SIMPLEX PACKAGING MACHINERY, INC., 534 - 23rd AVE., OAKLAND 6, CALIF.

fmc

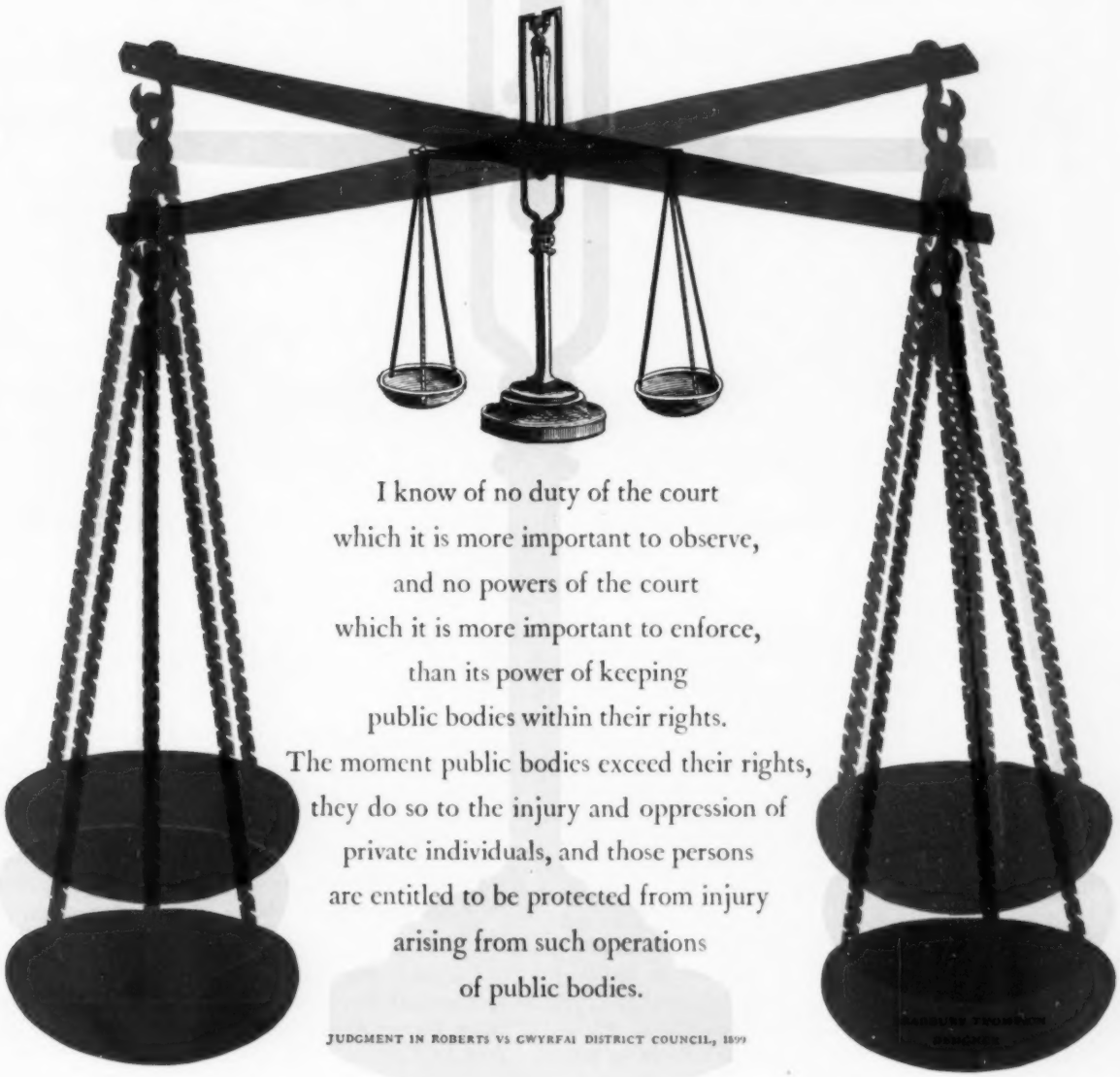
SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION

TRADE MARK

Great Ideas of Western Man

ONE OF A SERIES

Mr. Justice Lindley on Protection from Government



I know of no duty of the court
which it is more important to observe,
and no powers of the court
which it is more important to enforce,
than its power of keeping
public bodies within their rights.
The moment public bodies exceed their rights,
they do so to the injury and oppression of
private individuals, and those persons
are entitled to be protected from injury
arising from such operations
of public bodies.

JUDGMENT IN ROBERTS VS GWYRFAI DISTRICT COUNCIL, 1899



Container Corporation of America



FRESH APPROACH

THESE MARGARINES stay fresh longer *without refrigeration* because they're wrapped in Kaiser Aluminum Foil packages produced by such convertors as Milprint, Shellmar, Pacific Coast Foil. Result: they can be kept out on the shelf for better display, faster sales.

Even in long storage, by dealer or consumer, aluminum foil maintains original freshness of all foods. It's nonporous. Keeps flavor in. Keeps damaging air and moisture out indefinitely. Aluminum imparts no flavor.

The sparkling surface of aluminum foil is an unsurpassed eye-catcher. It makes a product desirable because it reflects the quality it protects. Steps up sales!

Aluminum foil is economical to use—reduces costly weight losses due to moisture evaporation or leakage. It's easy to print on, easy to handle in production.

Apply all the many advantages of aluminum foil to your customers' products—whether they are foods, medicines, pharmaceuticals, fluids, electronics, machinery.

Call any office for complete information and current availability. Kaiser Aluminum offices in principal cities. Kaiser Aluminum & Chemical Sales, Inc., Oakland 12, Calif.

Kaiser Aluminum

setting the pace—in growth, quality and service



From Every Angle

Take a shelf's-eye view of an H-A food container. See the ample label space that gives you immediate brand identification. See the well-designed, glistening body of the jar for effective display of product to complement the name. Notice the simple lines for easy handling.



Now Look at the Top

See the lithographed H-A cap with additional identification, or a recipe, or other goodwill copy.

Now Look at the Bottom



See that H-A. Remember, it always means production-wise glass containers, light in weight and made at a factory near you for economy and better service.

•

FROM EVERY ANGLE — sales and production — H-A packer's containers are right for your products.

HAZEL-ATLAS GLASS COMPANY
Wheeling, West Virginia



From the Gardner Gallery of famous American Packages

Perhaps

IT'S BECAUSE LIKE ATTRACTS LIKE

Certainly, it's more than coincidence that so many of America's most famous products appear on the nation's shelves in Gardner cartons.

One reason, of course, is Gardner's extensive and complete facilities. But more important, we suspect, is simply that like attracts like. One outstanding company likes to deal with another outstanding company ...a firm that maintains leadership by doing consistently superior work.

Here at Gardner we believe in never being quite satisfied with a good job. We feel an obligation to ourselves—and to our customers—to do even better, tomorrow, what we have gained recognition for doing well, today.

We think that's an important reason why you'll find so many of America's most famous products packaged in Gardner cartons.

THE GARDNER BOARD AND CARTON CO.

Manufacturers of Folding Cartons and Boxboards

GENERAL OFFICES: Middletown, Ohio—PLANTS: Middletown, Ohio; Lockland (Cincinnati), Ohio
Sales Offices in Chicago, Cleveland, New York, Philadelphia, Pittsburgh, St. Louis

GARDNER®



SLAM BANG TRANSIT TREATMENT PROVES TOUGHNESS OF SYLVANIA CELLOPHANE

Cannon Mills, like most manufacturers of quality products, are extremely particular about the packaging materials they use. After testing various ones for packaging their fitted sheets, flat sheets and bedspreads, they chose Sylvania Cellophane 600 MS-3 . . . a cellophane that provides an extra durable, transparent wrap. It stands up well under temperature changes and frequent handling.

In addition to laboratory tests, Cannon made case shipments of sheets wrapped in Sylvania Cellophane 600 MS-3 from their mills at Kannapolis, North Carolina to New York City and return. Despite rough treatment, all of the Sylvania-wrapped packages reached Kannapolis in as good condition as when they left.

In addition to having a tough base, Sylvania 600 MS-3 has a coating which permits an extra-strong heat seal. It may be easily imprinted and contributes a smart look of distinctive beauty to both large and small items.

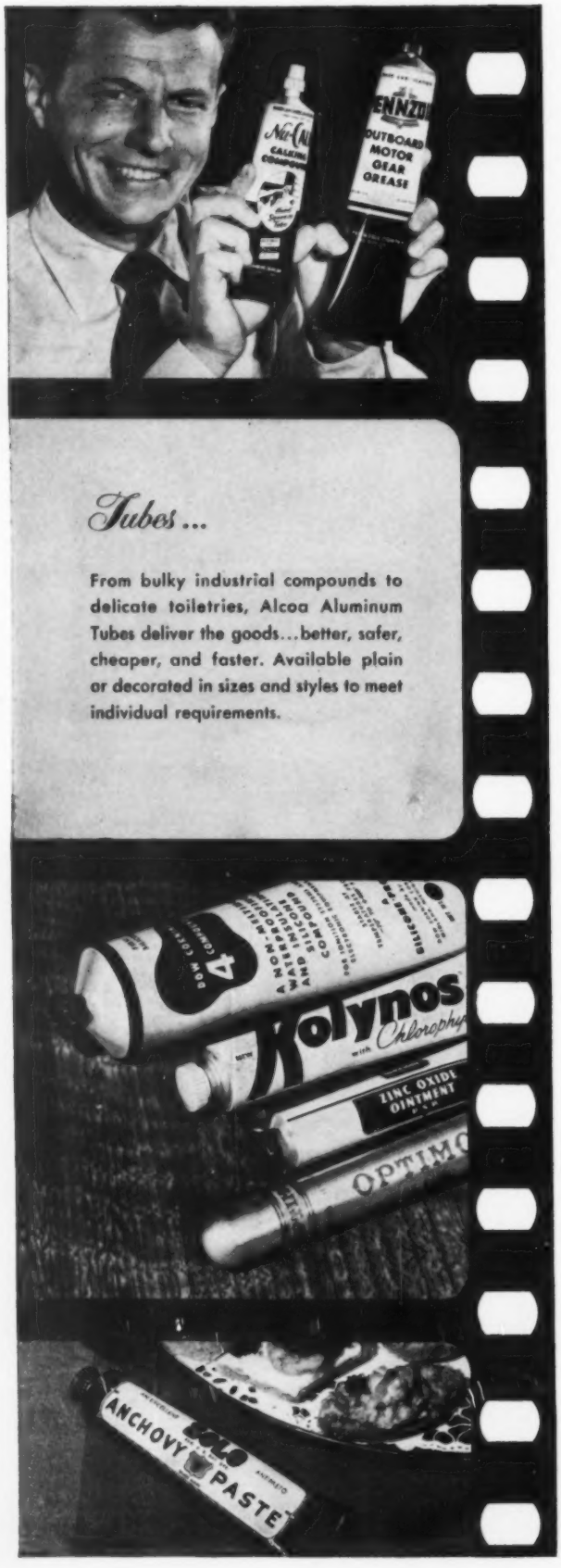
If you have a packaging problem which you think might be solved through the use of Sylvania Cellophane, why not get in touch with your local Sylvania representative, or write our Market Development Department. Sylvania Division, American Viscose Corporation, 1617 Pennsylvania Blvd., Philadelphia 3, Pa.



SYLVANIA CELLOPHANE

SYLVANIA DIVISION, AMERICAN VISCOSE CORPORATION


Symbol of Tin Plate Quality
J&L STEEL
1 Made to can manufacturers' specifications for packers of canned goods
2 Control of tin plating operation for each side of the strip
3 Strict standards of identification of differential coating
J&L Tin Plate—
ELECTROLYTIC GRADE #100/#25
DIFFERENTIAL COATING
1 Reduces cost of certain types of packers' cans
2 Saves tin, which is a strategic metal (35–40%)
JONES & LAUGHLIN STEEL CORPORATION
PITTSBURGH



Picture your package in *Aluminum*

As manufacturers of aluminum tubes and closures and the largest supplier of aluminum foil to independent package converters, Alcoa maintains the most complete package research, design and development facilities. If you have a packaging problem or wish latest information on any phase of packaging in aluminum, call us. Competent packaging consultants are readily available through your local Alcoa sales office, listed under "Aluminum" in your classified phone directory. Or, if you prefer, write direct to ALUMINUM COMPANY OF AMERICA, 1760-L Alcoa Building, Pittsburgh 19, Pennsylvania.

Alcoa Aluminum

ALUMINUM COMPANY OF AMERICA

Alcoa brings the world to your armchair with "SEE IT NOW" featuring Edward R. Murrow. Tuesday evenings on most CBS-TV stations.





Closures...

Fast-growing favorite with packer and customer alike is Alcoa's threaded HyTop Closure. Now used on leading brands of catsup, it is applied by Alcoa's exclusive Rolled-On method that matches closure threads to glass finish. Today, there's an Alcoa Aluminum Closure for practically any sealing requirement.





Foil...

Sparkling examples of protection *plus* sales appeal are the Alcoa Aluminum Foil wrappers found on the finest brands of oleomargarine and butter. Laminations of Alcoa Foil and film by leading converters have also been responsible for many farsighted packaging applications such as W. Atlee Burpee Company's new seed packet by The Dobeckmun Company and Stevens-Wiley Inc.



FIBREBOARD *Shipping Cases*

ARE ALSO TRAVELING BILLBOARDS!

In transit... in dealer displays... re-used at check-out counters as convenient carriers for customers' purchases, your shipping case is a four-sided billboard if properly used. FIBREBOARD'S Designing Department has assisted many packers and manufacturers in the effective use of this valuable advertising space.

16 plants on the pacific coast



it's the way your goods ARRIVE that counts!

FIBREBOARD PRODUCTS INC.
Head Office: San Francisco 11, California

FIBREBOARD PRODUCTS (EASTERN DIVISION) INC.
Philadelphia and Baltimore

SALES OFFICES: *(West)* Boise • Denver • Fresno • Los Angeles • Oakland • Phoenix • Portland • Sacramento • Salem • Salt Lake City • San Diego San Francisco • San Jose • Seattle • Stockton • Yakima; *(East)* Baltimore • Easton • Lancaster • New York • Philadelphia • Reading



"TOPS" FOR YOUR PRESSURIZED PRODUCTS

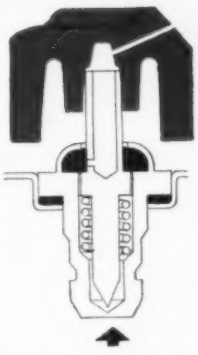
DILL

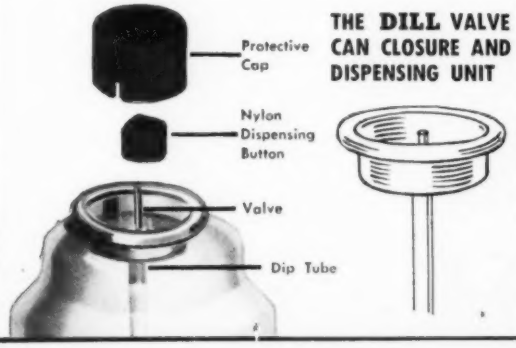
THE DILL AEROSOL VALVE

A Safety-Seal, Precise-Action Valve that produces a finer molecular and uniform spray with no after leak or drip. Available in 2 styles—*Ready to Use* or with *Non-Pierced* valve opening.

No. 5502—Open Valve

No. 5501—Closed Valve





THE DILL VALVE CAN CLOSURE AND DISPENSING UNIT

AEROSOL VALVES AND DISPENSING UNITS

DEVELOPED FOR THE ARMED FORCES
. . . NOW AVAILABLE TO YOU
EITHER "OPEN" OR "SEALED"

Everywhere, fillers of self-dispensing pressurized products are switching to the sensational new Dill Aerosol Valves and Dispensing Units with these outstanding features—

Safety Seal Precise-Action Valve
Fine Uniform Spray
Cost Saving Application
"Tops" for Reliable Service
"Tops" for Sales Attraction

Check these valuable merchandising and money-saving production advantages for your product. Write for full engineering details and test samples, now.

THE DILL MANUFACTURING COMPANY
700 East 82nd St. Cleveland 3, Ohio

A PRODUCT OF 44 YEARS EXPERIENCE IN THE DESIGN AND MANUFACTURE OF SAFETY SEAL VALVES

DILL AEROSOL VALVES

NOW! .....

FROZEN PACKAGED DINNERS *WRAPPED* on a HAYSSEN Automatic



● "Just heat and eat" are the directions printed on these pre-cooked, frozen meals by Quaker State Foods Corporation, Pittsburgh, Pa. After preparation under Government inspection, the dinners are tastefully arranged on ready-to-serve aluminum platters, covered with aluminum foil, then placed in cartons and overwrapped on a Hayssen Automatic Carton Wrapping Machine, with printed cellophane or foil. The neat, tight, colorful packages have taste-appeal and buy-appeal.

LOW COST, COMPACT, ECONOMICAL OPERATION

Over 43 years' experience gives Hayssen machines unmatched performance, low first cost, overall economy of operation. Many Hayssen units are in use today that were bought over 20 years ago.

Hayssen Wrapping Machines are rust-resistant for protection in wet, damp packaging rooms. Packages handled vary from 2 to 25 inches in length, 1¼ to 10½ inches in width and up to 6 inches in height. Overwraps with all types of wrapping material including cellophane, foil, wax paper, acetate, pliofilm are handled. Electronic control registers the printed design perfectly.



Wraps any type ... any shape package

WRITE for further information. Tell us your wrapping problem ... we have the answer.

A HAYSSEN FOR EVERY PURPOSE

Frozen foods, meats, sea-foods, poultry, vegetables, fruit, baked goods, flowers, textiles — practically anything.

IT PAYS TO WRAP THE HAYSSEN WAY

Hayssen MFG. COMPANY

Dept. MP-11 SHEBOYGAN, WISCONSIN

Since 1910, One of the World's Largest Manufacturers of Wrapping Machines





Appetizing color beckons "Help Yourself"

Smorgasbord at the KUNGSHOLM, Chicago

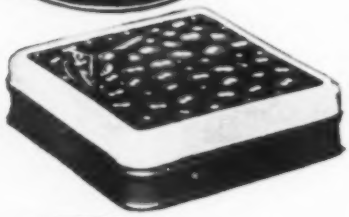
THE UNITED STATES PRINTING AND LITHOGRAPH COMPANY

EXECUTIVE OFFICES: Cincinnati 12, Ohio



YOUR PACKAGE should be the best Salesman you've got! Is it?





SOMEWHERE on dealer shelves your product must sell itself every day—every minute—your lithographed metal package must do it. It must attract that "impulse" buying. It may look good on your desk—but what about its competitive value on the counter or shelf of today's stores—where display space is at a premium? Heekin Cans beautifully lithographed with true, lasting colors can get that premium display space for your product. Heekin's exclusive high speed four-color lithograph presses offer you the most economical production in volume of lithographed cans. Whether you plan to buy cans now—or in the future—Heekin offers you fifty-two years of solid, sound experience—in production, in design, in merchandising.





1901 52 Years of Service 1953

HEEKIN *Lithographed* CANS

THE HEEKIN CAN CO.

PLANTS AT CINCINNATI & NORWOOD, OHIO; CHESTNUT HILL, TENNESSEE; SPRINGDALE, ARKANSAS



CROMPTON WILL BE GLAD
TO SUPPLY YOU WITH A LIST OF BOX MANUFACTURERS
WHO WILL HELP YOU DESIGN A PRACTICAL
EXCITING PACKAGE FOR YOUR PRODUCT

CROMPTON

Velvet or Velveteen, for handsome, durable boxes!

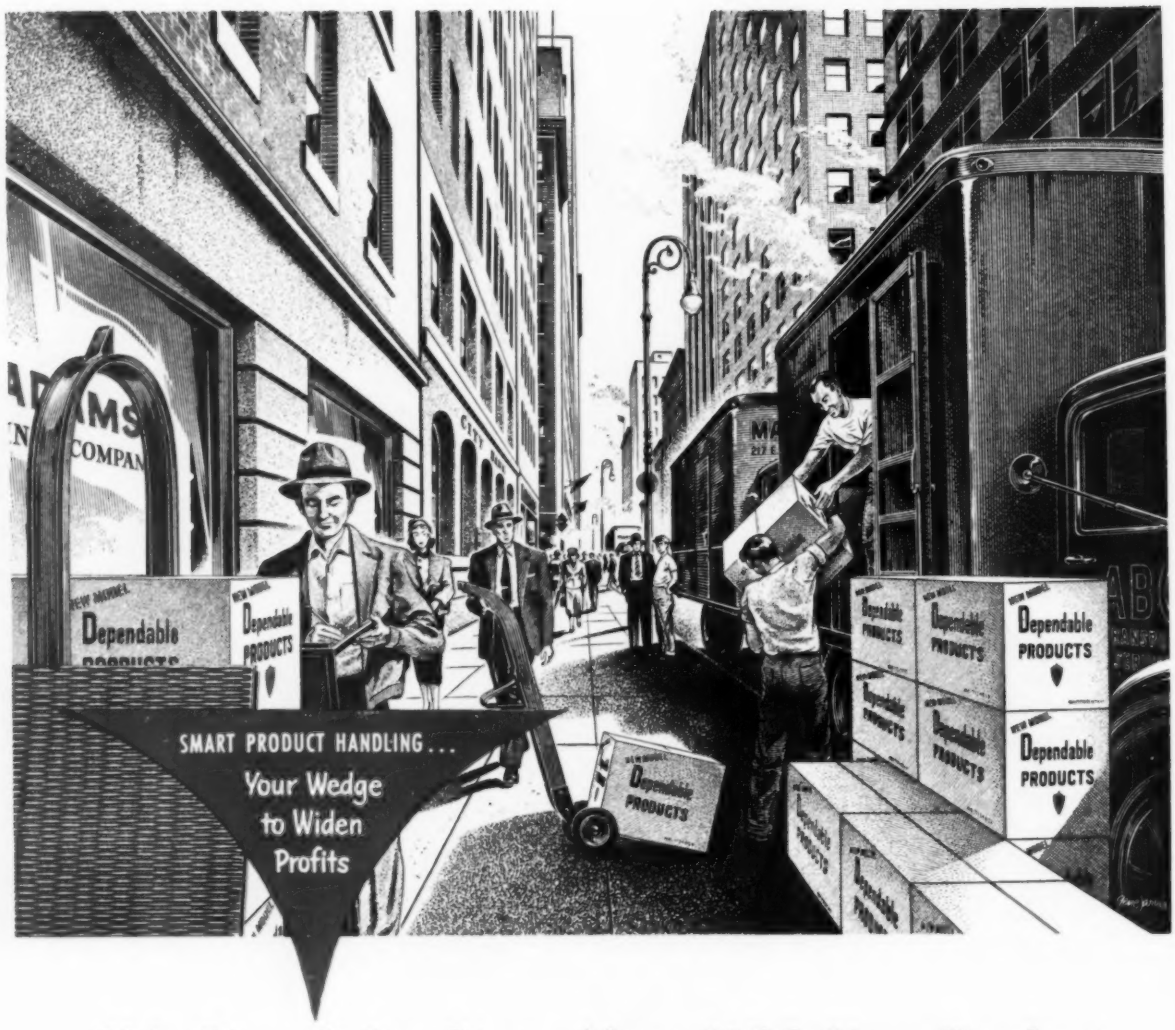
If you would like to build up the future of *your* men's jewelry business, we suggest you investigate the long-range selling power of the box lined or covered with Crompton Velvet or Velveteen. Here you see illustrated some striking containers for specific products which take full advantage of the show-off talents of these luxurious, glowing fabrics . . . PLUS suggested re-use virtues of these boxes.

Your boxes made of Crompton Velvet or Velveteen are more than just temporary expedient packages for your product . . . they are beautiful, decorative items in themselves. . . miniature treasure chests for storing knick-knacks, etc. With your trade name permanently inscribed on its rich, velvety surface, your box will continue to do an advertising job for you even after its immediate contents have been exhausted.

If you're selling men's jewelry, cigarette lighters and cases, tie clasps, cuff links, buckles, watches and watch chains . . . show them off in luxurious boxes made of Crompton Velvet or Velveteen. They'll sell *faster* to both men and to the women who buy things for men. *Crompton-Richmond Co., Inc.,*

The Pioneer of American Corduroy & Velveteen – Est. 1807

1071 Avenue of the Americas, New York 18, N. Y.



Ship Your Sales Story Along With Your Product In Eye-Catching Gaylord Boxes

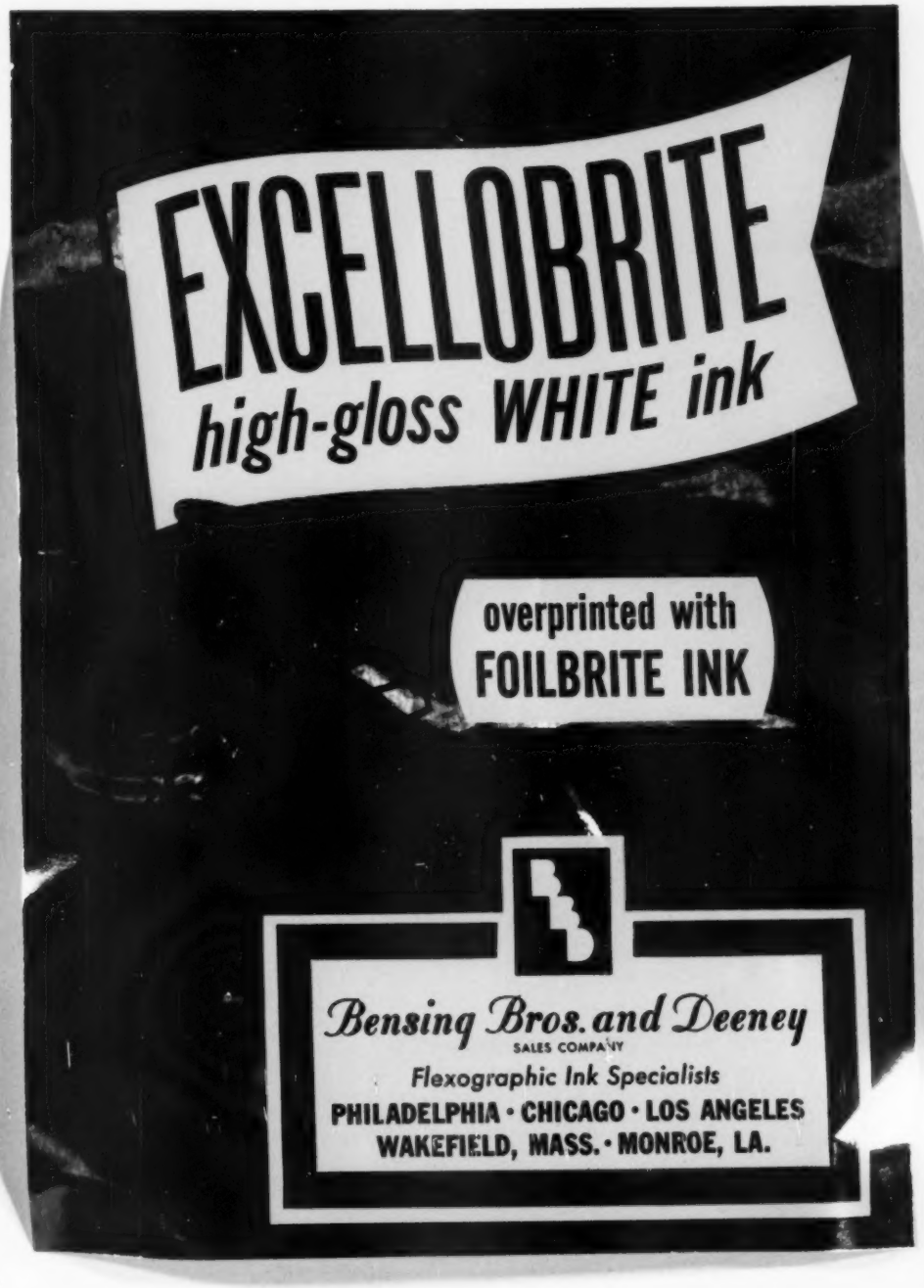
There are no extra freight charges for shipping a solid sales message on every attractively printed Gaylord box. You profit because your shipping dollars do double duty by promoting your product all along your channels of distribution. With these Gaylord "traveling billboards" you'll regularly reach hundreds of important buyers, sellers and handlers who see your product before it's unpacked. Sizes, shapes and designs that work to promote your product, as well as to protect it, are an important Gaylord "extra" service . . . and with Gaylord's quality of materials and workmanship, you can be sure every box is as brawny as it is beautiful. For information and cooperation, phone your nearby Gaylord office.

GAYLORD CONTAINER CORPORATION — General Offices: SAINT LOUIS, MO.

SALES OFFICES — Gaylord Boxes — COAST TO COAST

CORRUGATED AND SOLID FIBRE BOXES • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS • FOLDING CARTONS

How to improve print quality on FOIL with new flexographic ink



Use of high-gloss ink as down-color adds sparkle to overprint colors

There is a new way to print aluminum foil by the flexographic process and get glossy, sparkling results that complement the brilliance and lustre of the stock itself. The method is simple — use BBD's new high-gloss EXCELLOBRITE INK (in white, yellow or other light shades) as the first-down color, then overprint it with BBD's popular FOILBRITE INKS.

If you compare the printed foil sheet on this page with other foil jobs you have printed you will see the striking difference that comes from using glossy, opaque EXCELLOBRITE WHITE. You will see that EXCELLOBRITE's desirable gloss not only produces a much snappier white but lends extra sparkle to the overprinted FOILBRITE red and blue inks, too.

Also check the other good qualities of both EXCELLOBRITE and FOILBRITE INKS...note how smoothly they lay... how clean and sharp they print. Test them, too, for adhesion and flexibility.

The EXCELLOBRITE INK that gives this new, glossier effect on foil is the same ink used for high-gloss flexographic printing on most coated cellophanes and all treated polyethylene film. And it gives you the same extra mileage, excellent printability and trouble-free performance on the press.

For more information about EXCELLOBRITE and FOILBRITE INKS contact your nearest BBD office or write direct to Bensing Bros. & Deeney, 3301 Hunting Park Avenue, Philadelphia 29, Pa.

created to provide Permanent

VISQUEEN®

For years ink just wouldn't stay on polyethylene. Expert printers tried many devices, but the ink chipped, cracked and rubbed off. "You can't print on poly" became a byword of the packaging industry.

Then chemists and engineers at VISKING developed and perfected **VISQUEEN "C"** to take and hold ink—to provide a printing surface for brilliant printing that stays and stays and stays.

There's no substitute for **VISQUEEN "C"**. It's produced by a VISKING process. It loses none of its strength, toughness, durability because it's printable. So now you can have tough, durable polyethylene that takes ink and holds it!

Reasons why **VISQUEEN** is Superior for Flexible Packages

1. *Tough* **VISQUEEN** gives complete protection—doesn't split, crack, shatter or run, won't curl, break or dry out under display lights.
2. **VISQUEEN** *is readily adaptable* to high-speed packaging lines. Doesn't stick, doesn't break easily under tension, can be sealed with heat, sewn, taped, tied or stapled.
3. **VISQUEEN** *uniformity* is unequalled. Yields more packages per pound of film.
4. **VISQUEEN** *offers excellent product visibility* to promote impulse sales.
5. **VISQUEEN** keeps inventory in saleable condition—increases shelf life—outlasts the product it protects.
6. **VISQUEEN** packages stack well No rigid containers or separator sheets needed.
7. **VISQUEEN** locks out moisture or locks it in. Protects from dampness or drying out. Maintains moisture content you want for your product.
8. **VISQUEEN** will not freeze—remains soft and pliable to more than 70 degrees below zero.

VISQUEEN IS AVAILABLE CLEAR AND IN A WIDE RANGE OF COLORS.

Ink Adhesion



Important: VISQUEEN film is all polyethylene, but not all polyethylene is VISQUEEN. VISQUEEN film is produced by process of U. S. Patents No. 2461975 and 2632206. Only VISQUEEN has the benefit of research and technical experience of The Visking Corporation, pioneers in the development of pure polyethylene film.

This kind of printing stays *on* **VISQUEEN "C".** *Brand Identification won't rub off.*

VISQUEEN CONVERTERS ARE TOP EXPERTS IN PACKAGE DESIGN... ASK FOR THEIR HELP!

VisQueen® film... a product of

THE VISKING CORPORATION
World's Largest producers of polyethylene sheeting and tubing
Plastics Division, Terre Haute, Indiana
In Canada: Visking Limited, Lindsay, Ontario

Not only is **VISQUEEN** film a superior packaging material, but the converters who use it lead in design and manufacture, and are expert in solving tough packaging problems. They work with **VISQUEEN** technicians to give you their own superior skills and VISKING's acknowledged polyethylene leadership. If you desire, they can put factory specialists—able chemists and engineers—right into your plant to help you. This coupon will bring their assistance.

THE VISKING CORPORATION, BOX H11-1410, Plastics Division, Terre Haute, Indiana

Please send me names of VISQUEEN converters serving my area.

Name_____ Company_____

Address_____ City_____ Zone____ State_____



ROWELL BOXES

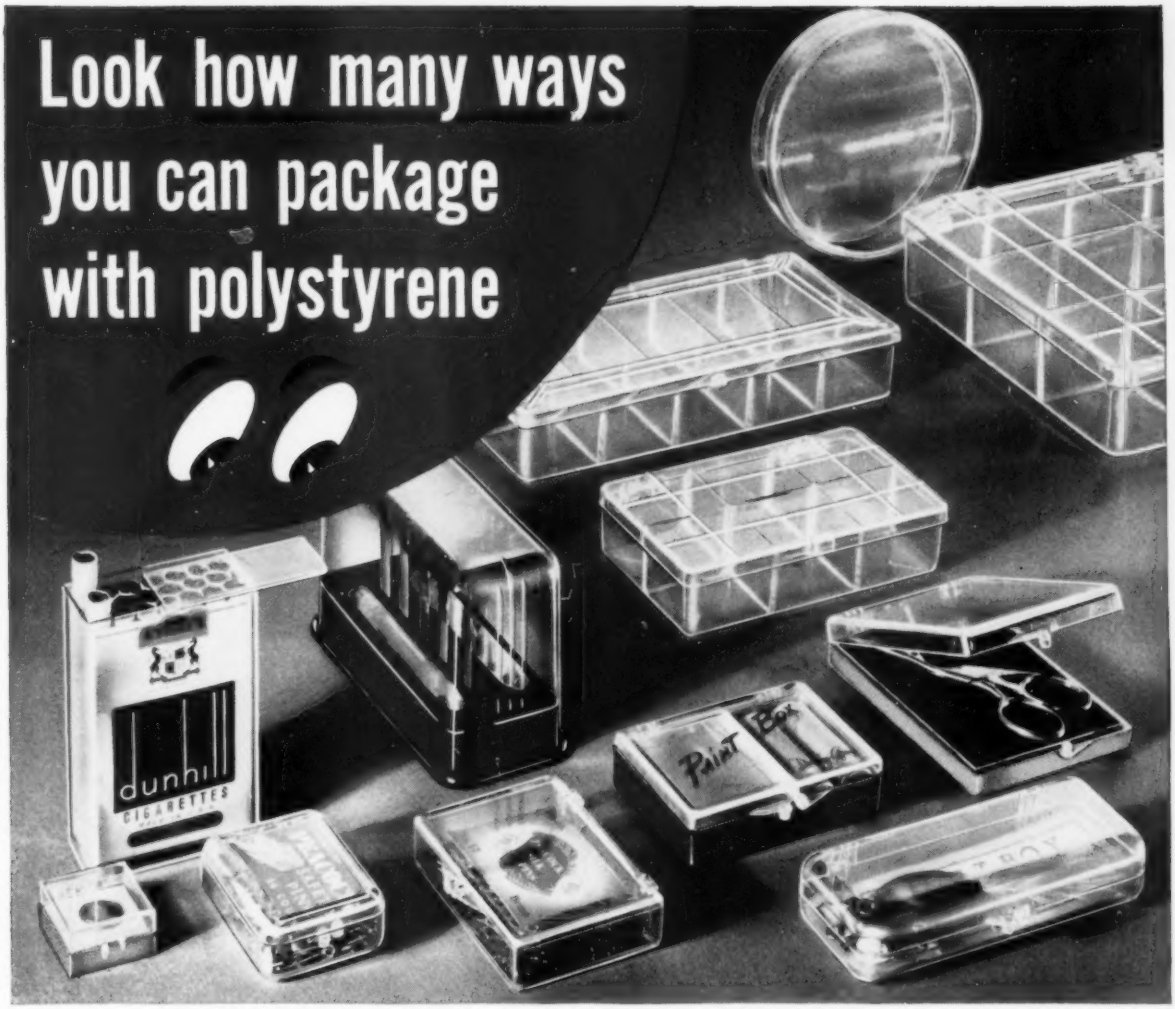
put your products on a pedestal

Join the proud packagers
who have Rowell create
square and round set-up boxes
that put their products
on a pedestal.

Manufacturers of Fine Paper Boxes

E. N. Rowell Co. Inc.
BATAVIA, NEW YORK

Look how many ways you can package with polystyrene



FIRST, crystal clear polystyrene allows your product to be seen and examined, yet protects it from damage by handling.

Where your product permits, the base of the package can be molded to form an appropriate stand or setting, thus lifting your product away from its background to catch the eye of a potential buyer more quickly.

When the magic of color is added to the base, the sales appeal of your product in a polystyrene package is even more powerful.

Packages made of Koppers Polystyrene are strong and sturdy, will not deteriorate with time, and offer the consumer a permanent container, either for your product or for other articles. The dimensional stability of Koppers Polystyrene assures a close fit of related parts, and permits use of either metal or plastic hinges. Molding with Koppers Polystyrene is fast, easy and inexpensive . . . resulting in a low unit cost per package.

Koppers has many types of polystyrene that are suitable for packaging applications. Write to us today for specific information about the polystyrene that will add maximum sales appeal to your product!

Koppers Plastics Make Many Products Better and Many Better Products Possible.

KOPPERS®

Koppers Plastics

Guaranteed by Good Housekeeping

KOPPERS COMPANY, INC., Chemical Division, Dept. MP-113, PITTSBURGH 19, PENNSYLVANIA

SALES OFFICES: NEW YORK · BOSTON · PHILADELPHIA · CHICAGO · DETROIT · LOS ANGELES

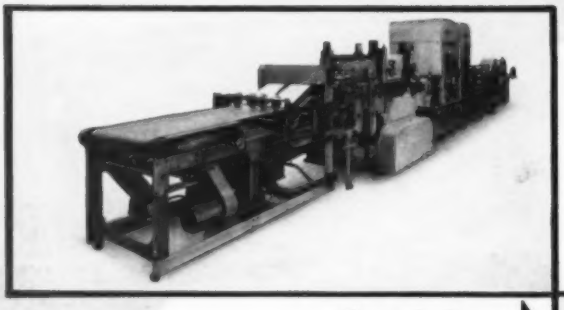
Hallmark of the finest printing and converting equipment...

Champlain

Rotogravure

High-speed precision-register printing on practically *any* stock in *any* practical multiple of colors. Meet the ever-increasing demand for more and better wrappers, labels, and cartons for packaged goods with Champlain *inline* rotogravure. "Speedry" ink fountain insures true reproduction of color and instantaneous drying. Print from roll stock 8" to 44" wide.

To complete a* CHAMPLAIN *rotogravure press—a* CHAMPLAIN *inline precision delivery unit:

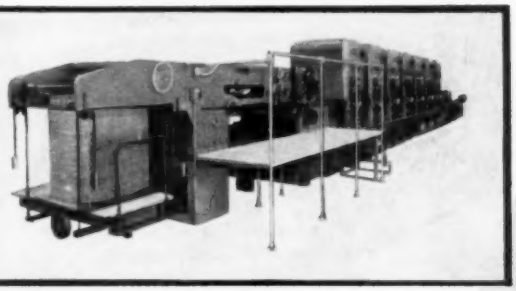


Cutting and Creasing Press

In one pass – only *once* through the press – it cuts, creases, and automatically yet thoroughly strips 7,500 to 10,500 cartons per hour from a continuous web. Platen press quality at *better* than cylinder press speeds.

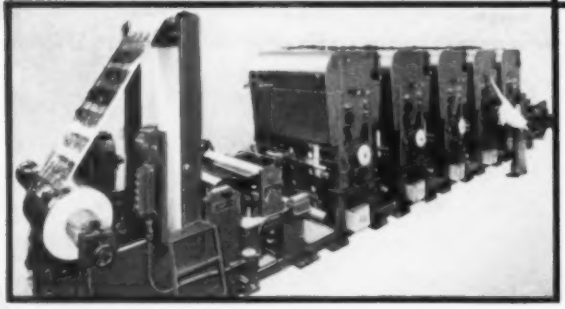
Sheet Delivery

Delivers from 8,500 to 12,500 square cut sheets per hour with 1/64" accuracy. ***Faster than any other standard sheeter.*** Positive sheet handling eliminates damage. No waste trim.



Rewind Press

Hydraulically-actuated constant-tension roll unit rewinds from 400 to 800 ft. per min. Positively synchronized to press for balanced speed, tension, and control. Single, multiple, and staggered-roll models.



Champlain



PLUS ***—a complete line of other equipment for all printing and converting needs.***

LETTERPRESS PRESSES, FLEXOGRAPHIC PRESSES, SPECIALTY PRESSES—for Tag, Chart Paper, End and Bakery Seals, Die Cut Labels.

CUTTING AND CREASING EQUIPMENT—Roll Fed Swing-Type Reciprocal and Stationary Die Cutting Presses – Vertical Extruding and Eccentric Punches and Perforators—Rotary Blankers.

SPECIALTY CONVERTING EQUIPMENT FOR INLINE USE—Rotary Embossers – Perforators and Score Units – Slitting Equipment – Hot Melt Thermoplastic Applicators – Special Delivery Equipment.

AUXILIARY EQUIPMENT – Automatic Electronic Register Controls (for multicolor and fabrication register on roll-fed equipment) – Automatic Web Splicers.

. . . and for special engineered equipment:

Champlain's ability to design and build special units is based on years of experience in developing inline printing, fabricating, and delivery equipment.

Write today for catalog of Champlain equipment. Champlain Company, Inc.
88 Llewellyn Avenue, Bloomfield, N. J. Chicago Office: 520 N. Michigan Avenue, Chicago 11, Ill.

3309



This is what our Mexican customers say about

the new HESSER glue and heat sealing machines

① **Guadalajara:**

„Muy señores nuestros y amigos:
Nos es muy grato manifestar a Uds. que su representante ha terminado de instalar la máquina empacadora que tuvimos el gusto de comprarles y ha entrenado al personal de ésta fábrica, encargado de manejar la máquina de referencia.

Tenemos mucho gusto en manifestarles que **el trabajo de la máquina es perfecto** y estamos **verdaderamente satisfechos de la compra** y con relación a su montador hemos quedado muy complacidos por su habilidad para la pronta instalación de la máquina que nos entregó trabajando a los pocos días de su llegada.

Con este motivo, nos es grato repetirnos de Uds. muy atentamente amigos y Ss. Ss.-"

Which means in English: PERFECT RUN AND FULL SATISFACTION

② **Monterrey:**

„Muy señores nuestros y amigos:
Tenemos el gusto de hacer constar que la máquina automática modelo PDHJ-IIIa que compramos a Ustedes recientemente ha quedado **perfectamente instalada** en nuestra fábrica por su ingeniero quien demostró tener un conocimiento absoluto de la misma, además de una gran voluntad para entrenar a nuestro personal en su manejo.

Consideramos muy acertada esta compra por la **excelente construcción** de la máquina y su magnífico funcionamiento.

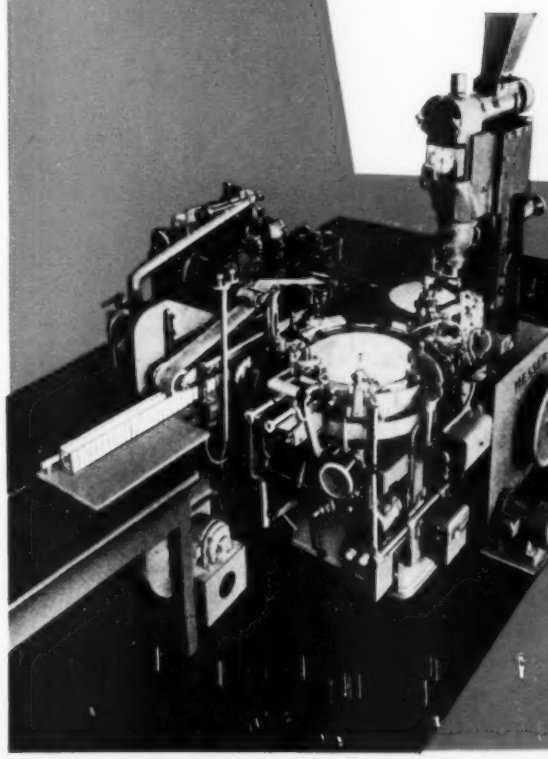
Nos es grato repetirnos de Uds. sus afmos. attos. Ss. Ss. y amigos."

Which means: EXCELLENT CONSTRUCTION AND INSTALLATION

Why not . . .

obtain in your own plant the benefits these same modern machines can give you?

They will produce airtight, siftproof packages, bags, or cartons at a saving in space, labor, and material costs.



FR. HESSER
MACHINE BUILDERS A.-G.
STUTTGART-BAD CANNSTATT
GERMANY

USA	**GEVEKE & Company, Inc.** 25 Broadway, New York 4, N.Y., USA
CANADA	**Packaging Equipment Service, Limited** 124 Willowdale Street, Willowdale, Ontario
MEXICO	**Agencia Comercial Anahuac, S. A.** Hugo Schelner Mexico 1, D.F., Avenida Madero 6



UTILITY and STYLE

Specialization and experience combine the advantages of metal ends, the economy of paperboard and label in a single package—rugged and versatile in use, handsome to look at.

SEFTON FIBRE CAN CO.

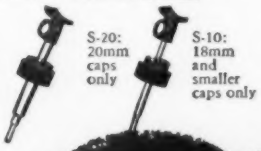
St. Louis; New Orleans; Portland, Ore.; Piqua, Ohio



S-15: 22, 24, 28, 30, 33mm and larger metal or molded caps

Calmar Plastic Sprayers

Guaranteed satisfaction in luxury colors at low cost for glass cleaners, residual type insecticides, space deodorants, medicaments, moth sprays, etc. Red, blue, green, yellow, ivory head and collar combinations.



S-20: 20mm caps only

S-10: 18mm and smaller caps only

Calmar Heavy Duty Sprayer

Unique plastic ring head construction gives easy operation for pint and quart applicators. Long life efficiency delivers 3 cc per stroke in a finely atomized spray for room deodorants, disinfectants, residual type insecticides, fungicides, moth sprays, etc. White and red collar and head.



S-15/L

the functional beauty of

Calmar

makes toilet goods and household products

easier to use . . . easier to sell



No. 1



No. 2



No. 5

Calmar Plastic Dispensers

These low cost attractive dispensers are featured by many leading manufacturers of hand lotions, liquid soaps, baby oils, beauty preparations, and household products. Calmar dispensers are equipped with stainless steel balls and springs. Calmar dispensers will never corrode when used with dispensable liquids not containing aromatic hydrocarbons, ketones or esters. All of the smart ivory head styles illustrated are assembled to jet black molded caps from 18mm to 33mm.

Calmar Mohair Applicator



Designed primarily for cleaning fluids, this functional closure is available in 28mm cap size with red enamel metal cover.

Calmar Atomizers

Save money yet actually improve your package with refreshingly new pastel colors. Compare Calmar's non-plugging, fine mist atomization with any metal atomizer. You will be amazed! The snow white polyethelyne mounting will never discolor or corrode.



Valveless rubber bulbs for colognes, anti-perspirants, hair preparations and products requiring the finest atomization.

Complete assembly includes matching color urea caps and rubber bulbs in your choice of Dawn Pink, Laguna Green, Light Blue and Off White. Immediate shipment of stock colors in urea cap sizes: 15-415, 18-400, 18-410, 20-410, 22-410.

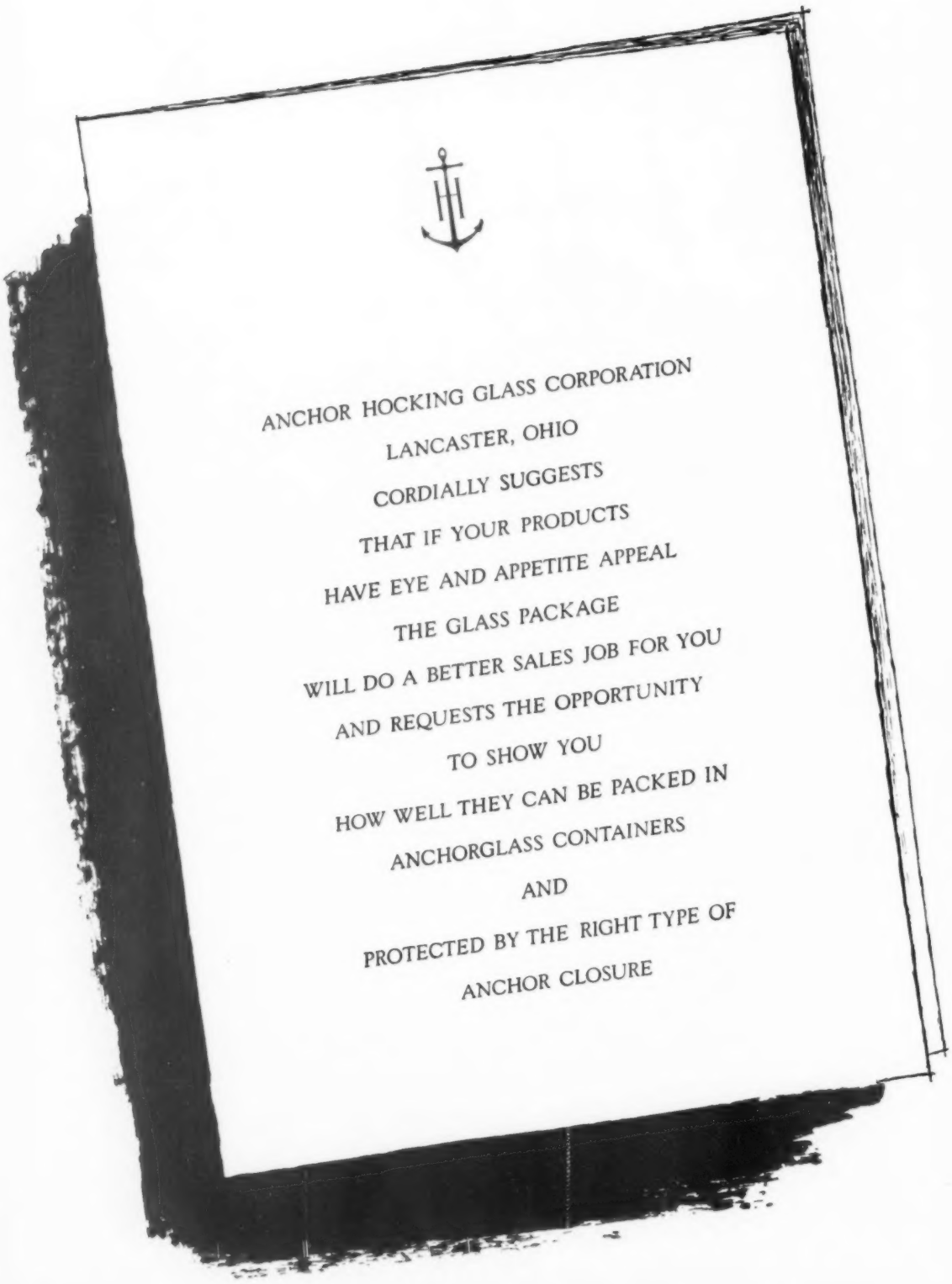
Special color caps and bulbs also available. Can be mounted to your own caps.



Valve-equipped bulbs for room deodorants, hair dressings, medicaments, disinfectants and similar products.

CALMAR COMPANY • 6800 McKINLEY AVENUE • LOS ANGELES 1, CALIFORNIA

Write for samples, specifying cap size and inside bottle height of your package


ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO
CORDIALLY SUGGESTS
THAT IF YOUR PRODUCTS
HAVE EYE AND APPETITE APPEAL
THE GLASS PACKAGE
WILL DO A BETTER SALES JOB FOR YOU
AND REQUESTS THE OPPORTUNITY
TO SHOW YOU
HOW WELL THEY CAN BE PACKED IN
ANCHORGLASS CONTAINERS
AND
PROTECTED BY THE RIGHT TYPE OF
ANCHOR CLOSURE

Satisfaction rests on the carton



Dealer good-will is vital in the highly competitive beer industry. Pabst Brewing Co., brewer of one of America's great beers, does an outstanding merchandising job with retailers, also makes sure that Pabst "Blue Ribbon" reaches the sales floor looking as good as it tastes. Pabst, like many other famous brand names, is protected in shipment by UNION Corrugated Containers.

TRADE MARK UNION

UNION BAG & PAPER CORPORATION

CORRUGATED CONTAINER DIVISION • Box Plants: Savannah, Ga., Trenton, N. J., Chicago, Ill.

Eastern Division Sales Offices: 1400 E. State St., Trenton 9, N. J. • Southern Division Sales Offices: P.O. Box 570, Savannah, Ga.
Western Division Sales Offices: 4545 West Palmer, Chicago 39, Ill. • Executive Offices: Woolworth Bldg., New York 7, N. Y.

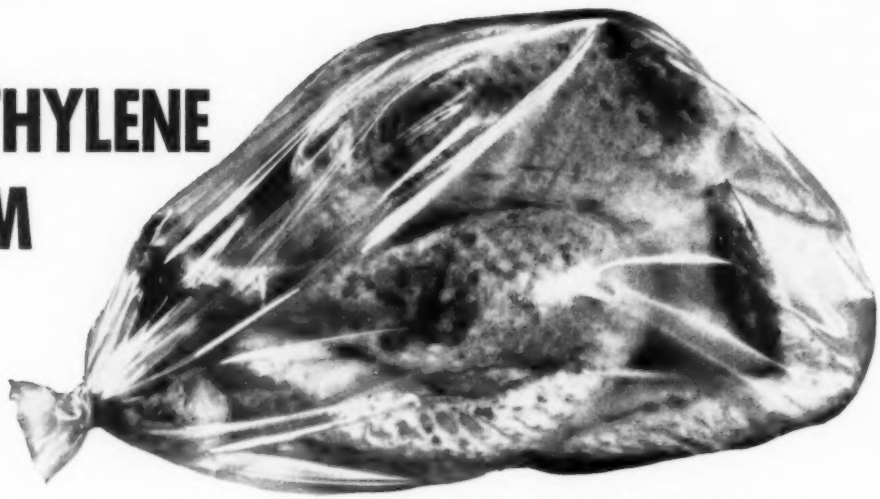
You get the right package

CELLOPHANE



PROBLEM: To give bacon the maximum eye appeal in a package that sells itself . . . showing the shopper that bacon strips are cut in half for her convenience. Answer: Du Pont LSAT Cellophane for visibility *plus* protection.

POLYETHYLENE FILM



PROBLEM: Packaging frozen turkeys for self-service requires an extra-tough transparent film that *stays* strong and flexible at low temperatures. Film must also conform to the irregular shape of the product. Answer: Du Pont Polyethylene Film.

for your product

with DU PONT'S complete packaging service



ACETATE FILM

PROBLEM: To give a label the extra sparkle that catches the shopper's eye . . . insuring a quality look that lasts under rough handling. Answer: a label laminated with gleaming, transparent Du Pont Acetate Film.

To help you get a package that makes the most of its merchandising possibilities . . . and gives your product the kind of protection it needs, Du Pont offers 115 varieties of three basic films—Cellophane, Polyethylene and Acetate.

Working with Du Pont's packaging specialists, you take advantage of over 25 years' experience in meeting the packaging requirements of thousands of different products. You get the right answers to the vital questions of selecting the right film type. Whether you need a film that's moistureproof, or one that permits graduated moisture loss. A film that's dimensionally stable, or one that conforms to irregularly shaped objects. One that's tough and flexible at low temperatures, or one that has brilliant luster.

And you can turn to Du Pont for help with questions of package construction . . . or consumer reaction to different types of packaging. Get in touch with your Du Pont representative. For information on printed materials and bags, get in touch with a converter of Du Pont films. Talk over your problem with him. Or write: E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Wilmington 98, Delaware.

Only Du Pont gives you all these packaging aids:

1. **WIDE VARIETY OF PACKAGING FILMS** scientifically tailored to meet the needs of varied products and packages.
2. **TECHNICAL** assistance to help you plan the most practical and efficient construction of your package.
3. **MERCHANDISING** help through continuing nation-wide surveys of buying habits, to keep your package up to date.
4. **NATIONAL ADVERTISING** to continually strengthen consumer preference for your packaged products.

DU PONT
PACKAGING FILMS
CELLOPHANE
POLYETHYLENE • ACETATE

DU PONT
REG. U. S. PAT. OFF.

Better Things for Better Living
. . . through Chemistry



Successful Products, Like Successful People, Should Look the Part

If Your Product Is Packaged,
It Will Look Best In...

Ridgelo
CLAY COATED
REG. U.S. PAT. OFF.
BOXBOARDS

Custom Made

FIRST CHOICE OF LEADING MANUFACTURERS OF COSMETICS AND TOILETRIES

Few fields are as competitive as that of cosmetics... few in which intangibles play so great a part... few in which impulse buying accounts for so great a share of total sales. *And* fewer still are the fields comparable to cosmetics in dependence on good packaging. Knowing these facts, leading manufacturers of such products also know that Ridgelo's custom-made Clay-coated Boxboard is the prime ingredient of outstanding folding boxes. No other equals it for whiteness, for brightness, for perfect printability. Cartons made of Ridgelo Clay-coated form and fill superbly. And it is available in a wide choice of finishes, colors, and coatings.

MADE IN RIDGEFIELD, N. J. BY LOWE PAPER COMPANY

Representatives H. B Royce, Detroit
Philip Rudolph & Son, Inc., Philadelphia
A. E. Kellogg, St. Louis
Norman A. Buist, Los Angeles

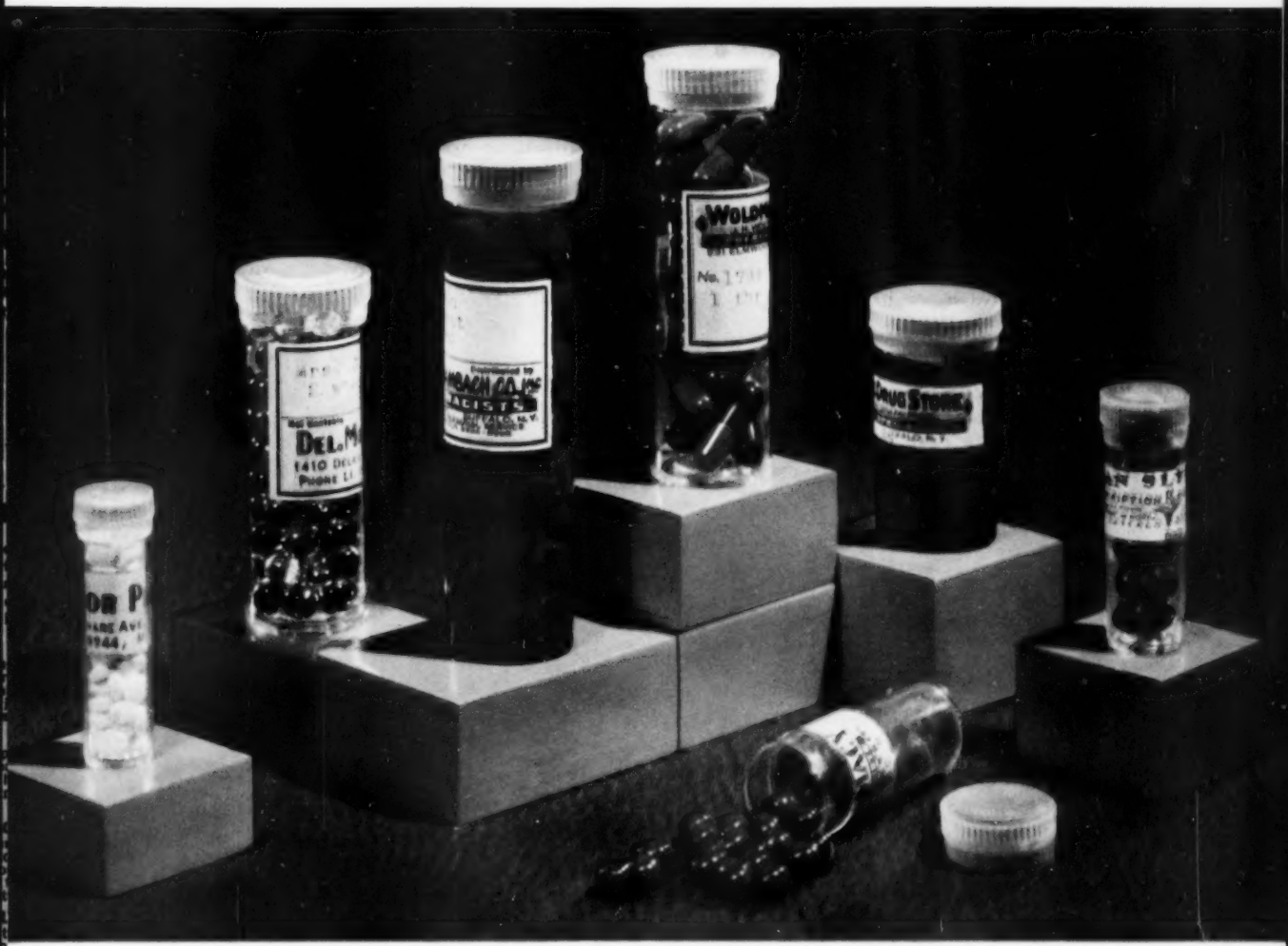
SPECIALTY HUNTING?

Looking for a soft, absorbent material with a moisture and grease-resistant backing? Investigate Ridgelo POLYEON Non-Woven Cloth. Reggie Ridgelo's POLYEON combines the outstanding properties of Polyethylene with selected materials, to help you produce superior packaging for your customers.



WRITE TODAY for your samples of POLYEON Non-Woven Cloth, kraft, foil, boxboard, tag and other sales-building combinations for protective packaging.

"DOC" had a Packaging Problem, too



Clearsite* solved it for him...
...they can solve it for you

"Doc," the druggist, has to protect his pharmaceuticals. That's part of his ethics. He has to merchandise them, too. Celluplastic transparent containers solved both problems simultaneously for him. They'll do the same for you.

Whether you're selling pills or drills, fish hooks or lipsticks, package them in Clearsite Transparent plastic containers and you'll put them on the path to greater sales. They compliment and protect your products. Any lettering, design or trade mark can be permanently printed in colors right on the container. They're feather-light, moisture-tight, priced right. Available in many sizes and adaptable to a wide variety of closures.

WRITE TODAY FOR DESCRIPTIVE LITERATURE

CELLUPLASTIC CORPORATION

General Offices: 50 Avenue L, Newark 5, N. J.

TRANSPARENT

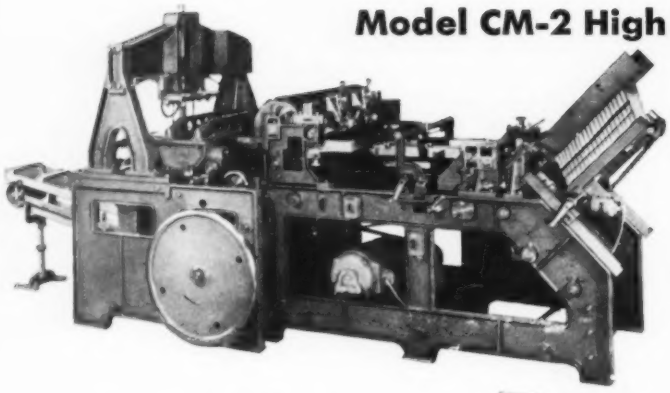
Clearsite*

PLASTIC CONTAINERS *that Sell*

*REGISTERED TRADE MARK

Now!... Production Speed is *DOUBLED* with the *NEW*

Model CM-2 High Speed Brightwood Machine



Once again
the BRIGHTWOOD leads the way—

You get

- **THE SAME HIGH QUALITY BOXES**
- **THE SAME DEPENDABILITY**
- **THE SAME RUGGED CONSTRUCTION**
- **BUT... *twice the speed!***
- ***Speeds up to 120 per minute***

Here are typical Brightwood blanks, every one of which can be set up on the Model CM-2 High Speed Brightwood Machine at speeds of 120 per minute or more.



These important qualities are all built into the new Model CM-2 High Speed Brightwood Machine.

SPEED—Half a century ago the Standard Brightwood, first machine of its kind and alone in the field, offered a speed of 20 per minute. From 20, to 30 to 40 to 60 per minute—and now, the new high speed model doubles previous high speed and provides 120 boxes per minute.

EASY ADJUSTABILITY—In designing this new model, we also gave a lot of attention to easy change over, with the result that it is even simpler to make a size change in the High Speed machine than in the Standard Brightwood, which is noted for its easy adjustability. Change parts required for new sizes on the Model CM-2 are at a minimum, most adjustments being made by handwheel or crank.

WIDE SIZE RANGE—The Model CM-2 glues and forms boxes from minimum 2 x 2 x ¾" deep up to 14 x 7 x 3½" deep. It will handle two-piece boxes and covers, one-piece hinged cover boxes, trays, etc.

NEW FEATURES—A new type of rotary feeder; rotary glue applicators; electric eye providing "no blank—no glue" (absence of blank stops gluing mechanism); another electric eye providing "no box—no blank feed" (absence of formed box in the well stops blank feeder). We've retained other important features of the Standard Brightwood that have proven their superiority over the years.

You probably won't want to run this machine for 40 years, but you can. It's built to last . . . that's our policy. There are Standard Brightwoods in the field still giving rugged service after 40 years, still producing the firmly glued and well squared boxes for which the Brightwood is famous.

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Package Forming and Filling
Carton Sealing, Lining,
Wrapping. Box Making

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EMBOSSED FOIL SEALS

ON PRESSURE SENSITIVE STOCK



World's fastest hand labeling operation

It's worth a phone call or letter today...

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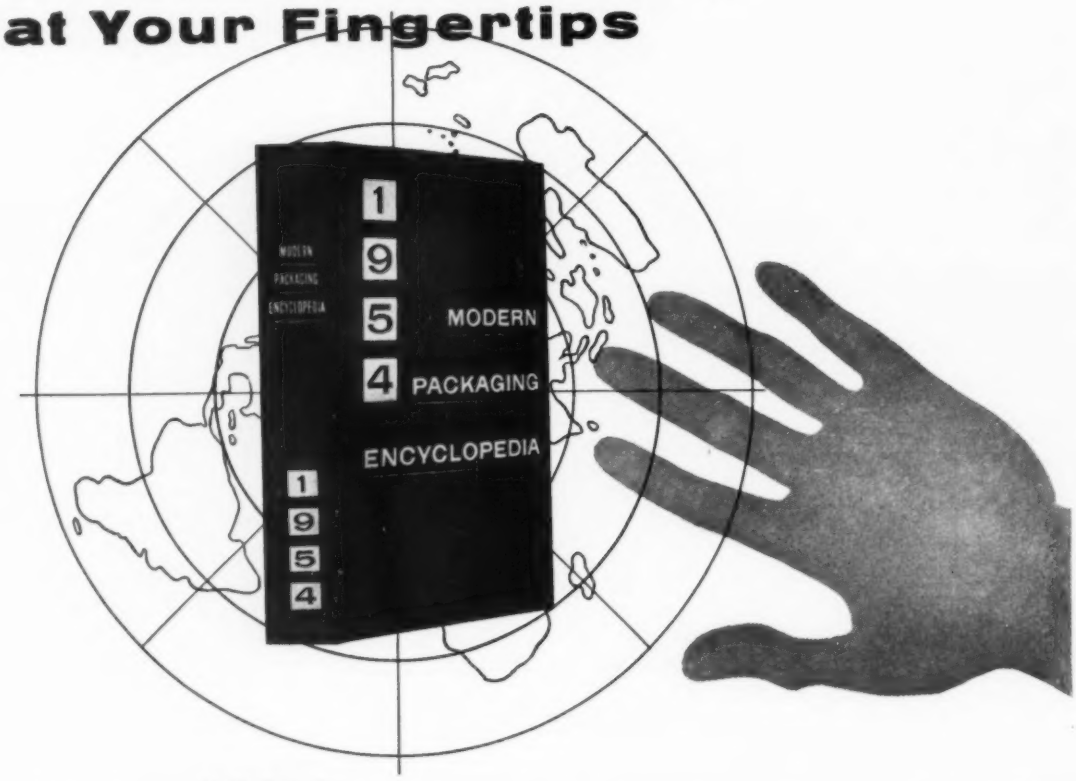
Just pick them off and press them on. Stick to all surfaces—Hold securely where others fail.

Remove easily—No water—No Glue—No Cleanup.

Labelsmiths

labels all kinds all types complete service

The World of Packaging is at Your Fingertips



with the 1954 Modern Packaging Encyclopedia

What are you looking for? Is it a machine? A packaging film? Is it information about establishing package specifications? Or the name of a company which can make custom laminations for you?

In all probability, exactly what you are seeking can be found in your copy of the data-filled MODERN PACKAGING ENCYCLOPEDIA.

The 758 pages of the Encyclopedia are arranged and cross-indexed for easy reference. A large quantity of informative advertising plus an extensive Directory Section of suppliers of materials, equipment and services guide you to qualified sources for all your requirements.

It's handy! It's helpful! It will be to your advantage to get acquainted with the MODERN PACKAGING ENCYCLOPEDIA. Like other users, you will find it to be one of the most useful reference works you own.

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You kill two birds with one stone by subscribing to Modern Packaging magazine . . . because a subscription entitles you to a copy of the Encyclopedia, too. Write to "Circulation Department" for full details.

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★ *A Quality Product of* **FISHER'S FOILS** *of* **LONDON, ENGLAND.**





Here's a new name in packaging materials— IVITHENE . . . from a company with almost 15 years' experience in plastic extrusion

IVITHENE is polyethylene extruded in film, lay-flat tubing and heavy sheeting. It offers all the remarkable advantages of top quality polyethylene and has achieved wide acceptance as material for drum liners, multiwall bag liners, textile wraps, produce packaging and fabricated containers.

And it offers an important *additional* advantage—Irvington's extensive production facilities permit unusually *prompt delivery* to users—both large and small.

For information on characteristics, suggested applications and technical properties, just mail the coupon below for your copy of our IVITHENE booklet on packaging materials.

SEND THIS CONVENIENT COUPON NOW

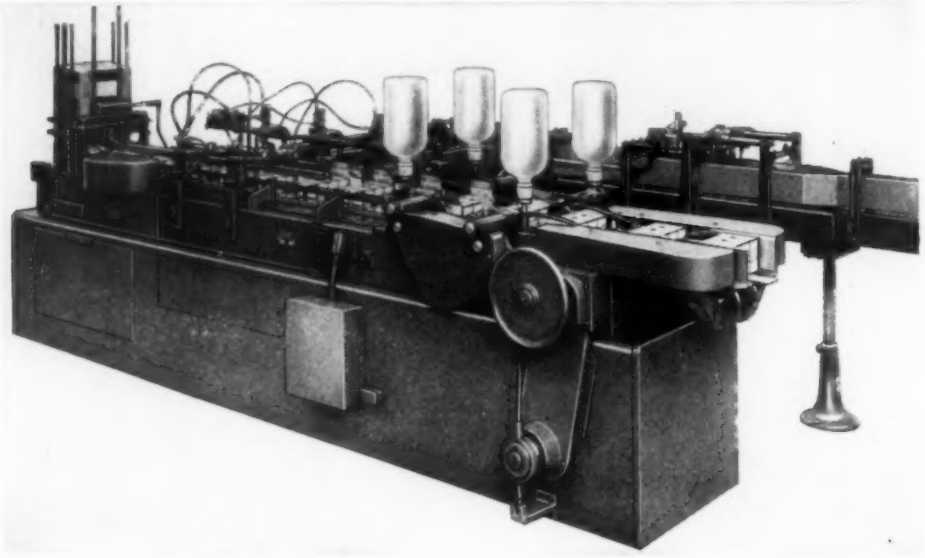
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Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ont., Can.

Irvington Varnish & Insulator Co.
28 Argyle Terrace, Irvington 11, N. J. MP-11/53

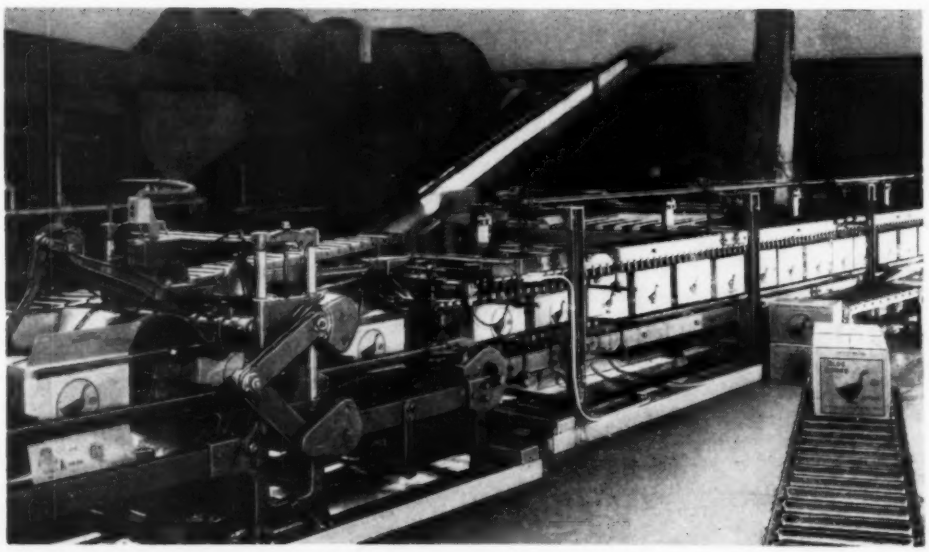
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Please send me your 8-page booklet on IVITHENE packaging materials.

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500-CAN-PER-MINUTE LINE FOR PACKAGED BEER Equipment developed by Standard-Knapp is helping brewers set new records for speed and efficiency in packaging canned beer. Can Inserter (shown) and Compression Unit opens six-pack cartons, loads, glues and seals them. In continuous sequence, other S-K machines collect and pack cartons into master shipping cases and then glue and seal cases.



Two Major Packaging Advances



IMPROVED CITRUS FRUIT PACKAGING Economies resulting from the use of corrugated shipping cases for citrus fruits are realized through the use of Standard-Knapp Gluers and Sealers. Citrus packers relied upon Standard-Knapp's application engineering to supply adequate equipment.

Only the best is good enough

Here you have two instances where Standard-Knapp equipment and application engineering solved important packaging problems. In the brewing industry, the need was for higher speeds effective throughout a complete line. In the citrus industry, the need was for equipment to prepare the new type shipping case for transportation and marketing.

Standard-Knapp has the breadth of experience to help you determine how and where to boost output, modernize or re-equip — the kind of experience that does not sell you a machine but an end result that pays off in lowered costs, increased productivity, reduced maintenance. As proven in the brewing, citrus and other industries,

IT PAYS TO STANDARDIZE WITH STANDARD-KNAPP EQUIPMENT

FULFILLED WITH STANDARD-KNAPP AUTOMATIC PACKAGING EQUIPMENT

IT'S EASY TO BRING YOUR INFORMATION FILE ON STANDARD-KNAPP UP-TO-DATE BY USING THIS COUPON

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STANDARD-KNAPP *DIVISION OF EMHART MFG. CO.*
PORTLAND, CONNECTICUT

Please send me information on equipment checked below:

- ☐ Bottle Packers
- ☐ Labelers
- ☐ Can Packers
- ☐ Gluers and Sealers
- ☐ Rinsers
- ☐ Six Can Cartoners
- ☐ Can Palletizers & De-Palletizers

NAME_____

TITLE_____

COMPANY_____

ADDRESS_____

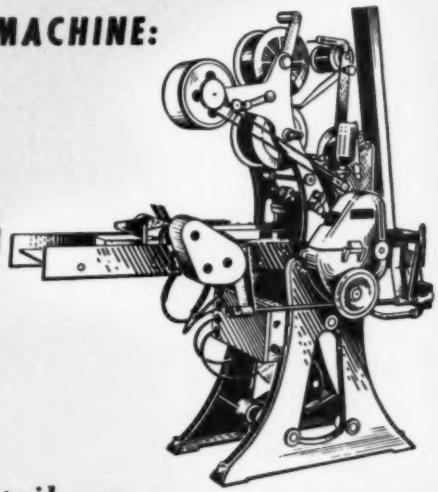
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FROM HEADACHES

SINCE THE BAYER COMPANY DIVISION TURNED TO SCANDIA AUTOMATIC BUNDLING MACHINES

YOUR PRODUCT, TOO, DESERVES THE BENEFITS OF THE *SCANDIA* AUTOMATIC BUNDLING MACHINE:



- **VERSATILITY**
  bundles in Kraft, glassines or cellophane
- **REDUCED COSTS**
  greater production and shipping costs reduced
- **IMPROVED APPEARANCE**
  custom wrapped; permits mass displays
- **COMPACTNESS**
  machine occupies less factory space

Your inquiries concerning detail performance characteristics are invited.

SCANDIA

Manufacturers of Better Packaging Machinery

SCANDIA MANUFACTURING CO. • 500 BELLEVILLE TURNPIKE • NORTH ARLINGTON, N. J. • PHONE KEARNY 2-8400

Positive Rust Prevention, Faster Packaging with new CROMWELL FERRO-PAK*



WRAP IT IN SECONDS . . . no need for oil or grease coatings

UNWRAP IT AND IT'S READY for immediate use . . . no time-consuming de-greasing

Cromwell *Ferro-Pak* is a new, improved volatile rust inhibitor paper. It provides complete protection against corrosion for ferrous metal parts and products. And it can save you money.

Long-lasting protection—Ferro-Pak paper releases an inhibitor vapor that seals out corrosion, even when parts are not in contact with paper. Positive anti-rust protection. Volatility is specially controlled so that inhibitor remains effective for maximum packaging life.

Easier packaging—Wrapping in economical Ferro-Pak eliminates need for heavy greasing or other time-consuming rust preventive methods . . . and the part is ready for immediate use. Strong, non-adhesive, harmless to handle.

**Made in compliance with Military Packaging Specification MIL-P-3420*

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TOOLS
PISTON RINGS
OFFICE MACHINES
ROLLER SKATES
VALVES, GEARS
FIREARMS
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For protecting metal work in process. For covering heavy machinery. As a separator in stacking metal parts.

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All weights and sizes. Available in extra-strength, laminated and reinforced papers. Sold by leading paper houses.

Cromwell PAPER COMPANY

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Send us samples and complete information on using Cromwell Ferro-Pak

Name_____

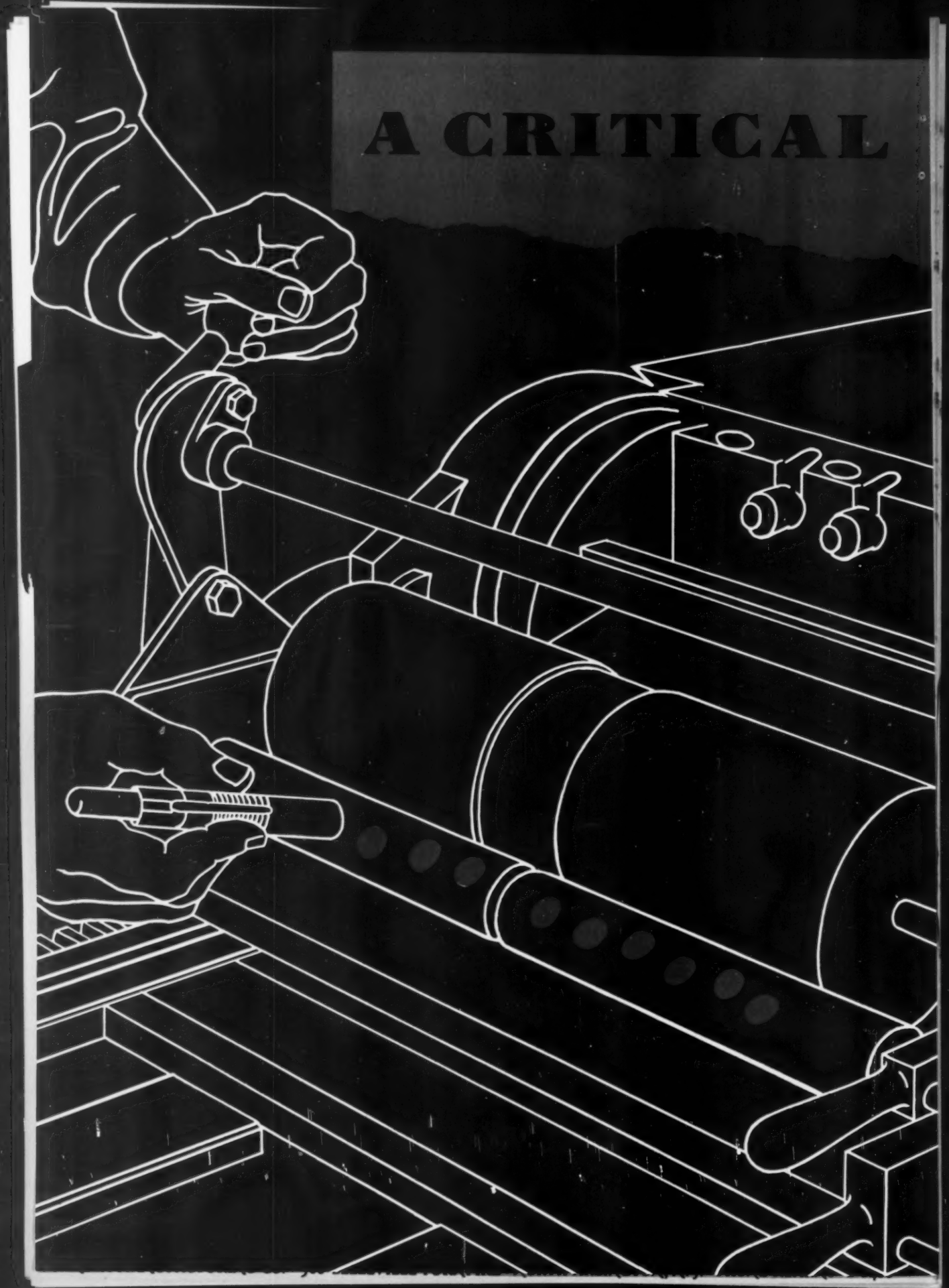
Firm_____

Type of Products_____

Address_____

City & State_____

A CRITICAL



TEST FOR RED

. . . or any other color that you want matched

Color matching a sample of printing ink is a job of decimal proportions.

IPI craftsmen test each match as it progresses on a Vandercook No. 4 proof press. They pull proofs on the same stock to be used in the actual press run. The split fountain or roller permits the two inks—the original and the new batch—to be run off simultaneously in exactly the same ink-film thickness for a true comparison of color and strength.

To eliminate guesswork when inking the plate—to measure out correct amounts of the two inks onto the roller—IPI technicians use an instrument called a Volumeter.

This device—seen at left—closely approximates the ink fountain settings on a production press. It establishes an accurate basis for predicting actual commercial press results from laboratory proofs. Thus, IPI customers are assured greater color uniformity with ink that has been tested and proven on the press before shipment.

IPI service at work for you

IPI complete ink service facilities are at your disposal in printing centers from coast to coast. Local IPI service stations and branches are staffed by local people who know your special printing problems intimately and are ready to help you solve them. That's why you can always rely on IPI for ink service that will help make your printing better. Don't fail to call on us!

IPI and IC are trademarks of Interchemical Corporation

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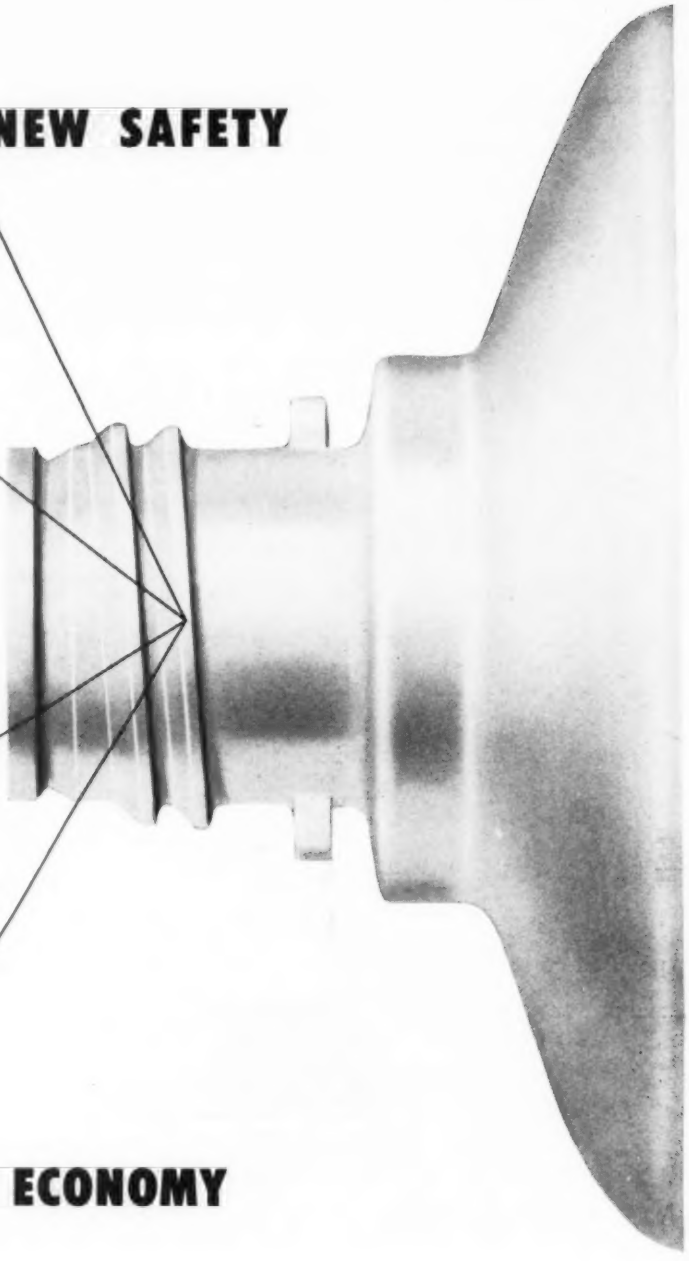
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RELY ON IPI FOR LEADERSHIP IN INK RESEARCH



NEW SAFETY

HANDLE CORROSIVES



NEW EASE

NEW ECONOMY

COMPANIES IN ALMOST EVERY MAJOR INDUSTRY are using one-piece, light weight Plaxpak® carboys. Age-old breakage problems have been eliminated. Employees move and use hazardous chemicals with new ease and efficiency. Carboy replacement costs are practically zero.

DESIGNED FOR SMOOTH POURING. Plaxpak carboys are available in 6½ and 13-gallon capacities, either naked or enclosed in a plywood jacket. Made of inert polyethylene, they are resistant to acids and alkalies. They can be frozen without damage.

YOU CAN ELIMINATE BREAKAGE PROBLEMS in your plant—improve your handling, use and storage of hazardous or expensive chemicals—increase your protection of people and equipment—by adopting Plaxpak carboys. Write for our brochure—and get all the money-saving facts about this modern way to handle bulk liquids.

PLAX CORPORATION

672 FARMINGTON AVENUE

WEST HARTFORD, CONN.

PLAX

PLAXPAK CARBOYS . . . the safe, saving way to handle bulk liquids



these customers know!

easiest way to move merchandise is through CHASE "WINDOWS"



Polytex packed popcorn...



stays fresher longer...



increases sales too

CHASE **Polytex** BAGS

Why *transparent* Chase POLYTEX? Count the ads in any magazine that PICTURE the products advertised. The parallel is obvious . . . PEOPLE WANT TO *SEE* WHAT THEY'RE BUYING.

Smart merchandisers showcase their products in smart, attractive, *transparent* Chase Polyethylene bags. Colorfully imprinted in non-fade, non-rub-off inks, these bags combine exceptional product visibility with product protection and brand identification. The result—greater sales, more customer appeal.

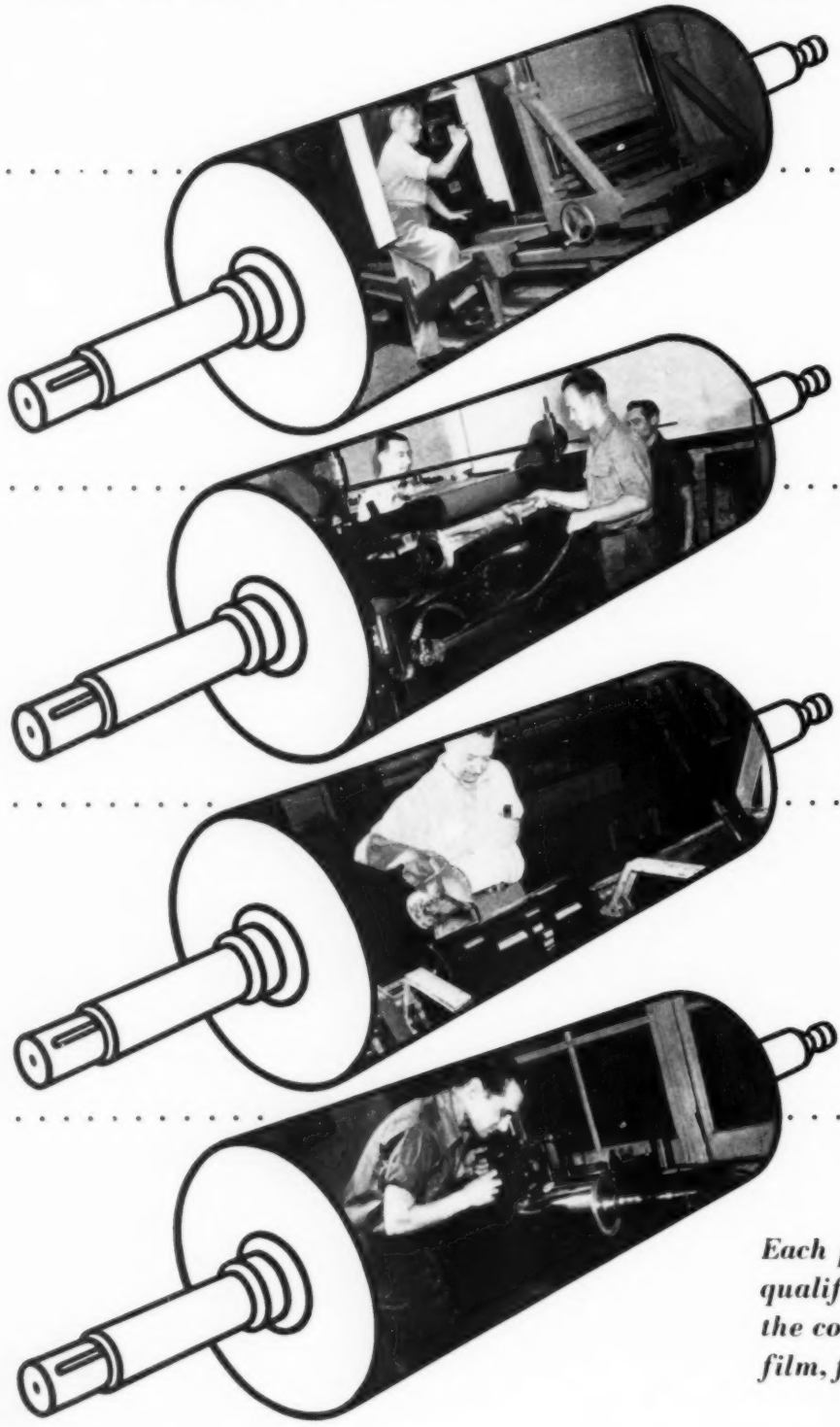
SEND FOR A FREE POLYTEX BAG and current price list today . . . Examine the sturdy construction, the sharp clear printing. Address your request to the POLYTEX Department.

SINCE 1847

CHASE BAG COMPANY

GENERAL SALES OFFICES: 309 W. JACKSON BLVD., CHICAGO 6, ILL.
30 BRANCHES AND SALES OFFICES STRATEGICALLY LOCATED

BECK ROTOCYLINDERS



From Camera

To Laydown

To Etching

To Finishing

Each precision operation by qualified craftsmen insures the correct printed result on film, foil, paper or boxboard

The Beck Engraving Company • 105 South 7th Street, Philadelphia, Pa.



also available in clear glass

She was sold when she saw it. The package whispered to her, coaxed, "Buy Me!" And she did. It happens every day with many famous brands who pack to attract in Maryland Blue. Blue is a double-duty package. It makes a strong, practical container and it acts as a powerful advertising, merchandising and selling tool. It puts your product's best foot forward in the passing parade of busy shoppers. Get complete details. Write for samples today.

MARYLAND GLASS CORPORATION • BALTIMORE 30, MARYLAND

stops the eye . . . starts the sale

pack to attract in maryland blue





Famous Brands are "at home"

in their Nashua Wraps...

To put your product on the shelf at home, look into the things Nashua-packaging can do for you.

TONI uses Nashua's Dry Label Paper to dress up the product with a label that *stays on.* This label always looks neat because you don't use glue when you use Dry Labeling. If you package products that use labels, write for samples of Nashua Dry Label Paper.

CUTICURA uses a gleaming waxed Nashua inner wrap for protection, and also for promoting other Cuticura products.

To move your products into more homes, make use of Nashua's experience in designing and producing packages that say "quality." It's the way to get more people to reach for your brand. Write today.

NASHUA CORPORATION
54 FRANKLIN STREET
NASHUA, NEW HAMPSHIRE

NASHUA

Everything in Flexible Packaging that Sells

DESIGN PRODUCTION

PRINTED FILM • WAXED WRAPPERS • BOX PAPERS • BOX STAYS • GUMMED PAPERS
HEAT SEAL PAPERS • FLOCKED PRODUCTS • PARTY PAPERS • PRINTED BANDS
CORRUGATOR'S TAPE • SEALING TAPE • MOISTENING MACHINES • TECHNICAL PAPER PRODUCTS

VOLUME 27
NUMBER 3
NOVEMBER, 1953

Modern packaging



JUNIOR SIZE packages of actual Pillsbury cake mix in Kay Stanley's toy cake-mix set will make enthusiastic Pillsbury customers of younger set.

CARTONS, EAGLE BOX CO.

Get 'em young

Packaging techniques to win brand loyalties early are sharpened by today's increasing knowledge of youngster influence on buying habits

By 1955 one-third of the population of the United States will be under 15 years of age—nearly 53,000,000 children. The power of Junior and his little sister in shaping adult buying habits for everything from soda pop to automobiles can no longer be ignored.

How best to capture the booming youth market is one of the hottest questions in the marketing divisions of thousands of manufacturers of branded packaged merchandise. "Get 'em young" is the universal slogan, even though the product may sometimes seem remote from interests of the pinafore and backyard-cowboy set.

And the package more than ever before is being designed with appeals to make the child lead Mom by the hand in the supermarket to the brand that features the attraction that he has seen on TV, in the movies, in magazine and newspaper ads—or heard about over the radio. The visual impact of packages shown on television is a major new influence on children.

There's a long-range angle to this strategy. If brand loyalty can be developed during the early, impressionable years, it is reasoned, customers may be made for life.

And the packaged product that creates a child fan has the prospect not only of future but of present sales, for the child's influence on parents' choice of brands is tremendous. Witness reports like these:

In Philadelphia supermarkets 77.5% of mothers shopping bought at least one item at a child's suggestion

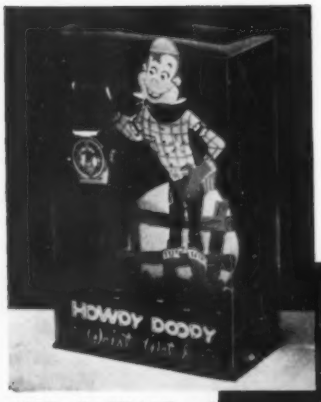
Character heroes of movies, TV and comics are master salesmen

DONALD DUCK is Walt Disney's super-salesman of edibles. His orange juice is the largest-selling brand of single-strength orange juice. His picture on labels helps to sell 200,000,000 loaves of bread a year, soft drinks, cheese crackers, sherbet and peanut butter. Mickey Mouse cookies are a long-time Nabisco favorite. Colgate's Peter Pan soap tied in with the movie, "Peter Pan."



PUPPET BAGS of polyethylene make Donald Duck toy for child when the socks are removed.





GIFT PACKAGE of transparent acetate with colorful paperboard Howdy Doody cut-out is expected to make Howdy Doody watch one of the biggest-selling character watches this year.



HOWDY DOODY characters are selling $40,000,000 worth of merchandise a year. They are used as masks on Kellogg packages, picture portraits on Blue Bonnet Margarine, trading cards on Royal Desserts, decoration on Welch's jelly glasses.

—and nearly two-thirds of the decision-makers were toddlers between 2 and 6 years old!

A pilot study in New York City showed that 74% of the families interviewed indicated children's influence in the selection of soft drinks; 47% in the selection of male hair preparations; 41%, in feminine hair preparations; 28%, in breakfast cereals; 26%, in fruit juices.

In the Los Angeles area more than half the children watching television asked their parents to buy TV-advertised products—and three out of four of the families succumbed to this influence!

In Starch surveys of Sunday-supplement readership, high-school students were found to be three times as attentive to ads as their parents.

Even New York's Museum of Modern Art is exhibiting "premium toys designed for industry."

In the current campaign to reach down to the very youngest levels of brand influence, there is a new version of the old sampling idea. Now, instead of product give-away, the samples, in the form of miniature package replicas, are being sold by



HOPALONG CASSIDY merchandise reaches $50,000,000 a year. Kids go for Hoppy's Favorite Ranch Bread.



LI'L ABNER'S own cabin in Dogpatch, formed by construction of this Carr-Consolidated Biscuit Co. cookie package, is a sure-fire winner with the kids.

the millions in toy sets and kits.

Some 60 or 70 replicas of famous branded packages may be seen today among kids' playthings, furnished by such outstanding companies as Pillsbury, Kellogg's, Colgate-Palmolive-Peet, Johnson & Johnson, Richard Hudnut, Shinola, The Toni Co., Harriet Hubbard Ayer, American Sugar Refining, Brillo and Bristol-Myers—and the list is growing every day.

Character packaging

One very tangible indication of the increasing influence of children is the snow-balling growth of licensing firms which own the rights to the character heroes of the comics, TV, the movies and radio. Character merchandise is doing business somewhere in the neighborhood of $600,000,000 a year. More than 100 "characters" are reported to be helping to sell packaged goods of one kind or another. Five licensing firms account for about 40% of the sales.

The leader still is the Walt Disney organization, whose characters are helping to sell about $100,000,000 worth of goods annually. Donald Duck on citrus fruit-juice cans has been around for years, introduced in a big way around 1945. The Disney organization did not give it much thought in the beginning, but Donald Duck orange juice is reported today to be the largest-selling brand of single-strength orange juice in the United States. The character label has given recognition to a dozen different brands which formerly were unknown nationally.

National Biscuit Co., one of the oldest Disney licensees, and several independent bakers produce approximately 200,000,000 loaves of Donald Duck-packaged bread annually. Nabisco's Mickey Mouse cookies have long been a favorite and National Biscuit has just gotten out a new package of Donald Duck cheese crackers. Mickey Mouse is celebrating his 25th birthday this year and to observe the occasion Nabisco is getting out a cellophane-wrapped single slice of cake with the package suitably printed.

While other Disney characters appear on hundreds of packages for toys and children's clothing, Donald Duck is the super-salesman for the majority of items falling into the edible category. General Beverages, Inc., Chattanooga, Tenn., has introduced a new Donald Duck line of soft drinks. The familiar character is also appearing on ice-cream cartons, candy packages, frozen foods and many others. The Disney organization, as do other major licensing organizations, maintains an art department to assist with package design and to assure authentic resemblance of the characters.

Another interesting use of Donald Duck is for a polyethylene bag for children's socks, made in the shape of a hand-manipulated puppet which the child can use as a toy.

Hopalong Cassidy hit the $50,000,000 mark two years ago. Howdy Doody has jumped up from selling $10,000,000 worth of goods in his first sales year, 1949, to a place where Kagran Corp., which holds the rights to Howdy Doody characters, reports $40,000,000 for this year. Howdy characters are being seen currently as masks on the back of Kellogg packages, on carriers for Welch's grape juice and glasses of Welch's jellies, on a series of trading cards for the back of Royal Desserts, as picture portraits on Blue Bonnet Margarine and as a chief attraction on Continental Baking Co.'s Wonder Bread and Hostess Cake packages.

Cowboys Roy Rogers and Gene Autry are next on the list, working for a considerable number of foods and soft-goods items, while Al Capp Enterprises' Li'l Abner is coming up front along with some of the new science and space figures of TV, such as Captain Video and a new one, Rod Brown of the Rocket Rangers, who may be seen on packages soon.

Games and cut-outs

Characters, however, represent only one type of package appeal that is used to win the children. A check of the cereal shelves in food stores would make one wonder whether any brand could survive without offering multiple and constantly changing kid cut-out and premium attractions. They also give an idea of the variety of appeals that must continually be dreamed up by promotion departments. Recent Kellogg packages, in addition to the Howdy Doody and other masks on cartons of Corn Flakes and Rice Crispies, are carrying a series of animal cut-outs and scrapbook coloring cards on Sugar Frosted Flakes packages, cut-outs

Competition demands constant search for new features



VARIETY of appeals is indicated by leading cereal packages—Kellogg's masks, animals, magic tricks, coloring pictures, ad-writing contest and special premiums. The Quaker Oats Co. packages are now deep in the space sciences.

of "famous sports cars of the world" on Pep Whole Wheat Flakes, magic tricks on Raisin Bran packages and famous Indian drawings on the back of the Sugar Corn Pops package which features characters from the Wild Bill Hickok show on the face of the carton. In addition to the kid pictures and cut-outs, there is very often a premium offer—once in a while teaspoons for mother, but more frequently such things as a Wild Bill Hickok Marshal Badge or a "yo-yo ring siren" for 25 cents and a box top. One of Kellogg's most successful package promotions has been its child ad-writing contest, with a prize of "a swell pin" for every one who enters and a chance for prizes of U.S. Savings Bonds of $25, $100 or even $500. Practically every magazine reader, or TV or radio listener, has been made conscious of Kellogg through the child-written ads which have been used in Kellogg advertising. Each entry, of course, must be accompanied by a box top, which means the sale of a Kellogg package.

Quaker Oats Co. is using widely on its leading cereals a whole series of space science cut-outs. The tray on its tens' packages carries premium offers such as Indian Brave and bird trading cards.

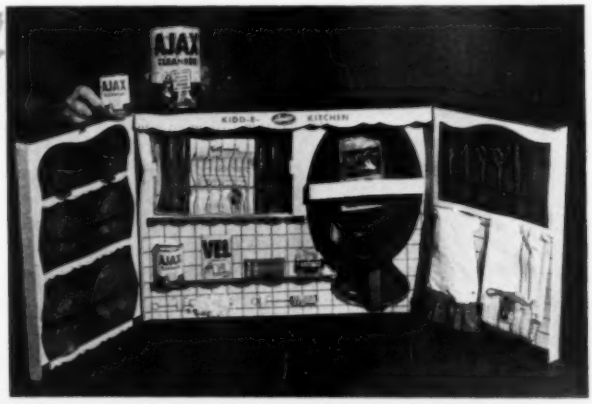
General Foods has been tying in its Captain Video program with cut-outs on Post Cereal packages. A brand new GF promotion for Swansdown is a packed-in toy cake-baking pan in every package so that daughter may bake a midget cake when mother does.

Miniatures

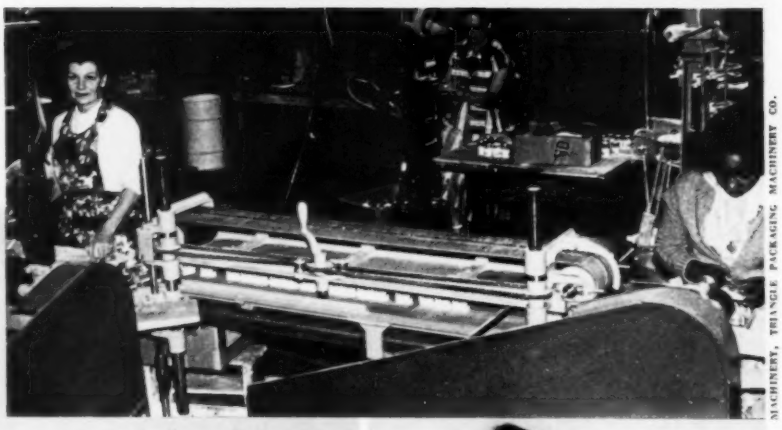
A very significant recent trend is the interest large packagers are showing in supplying miniature samples of their products or packages to toy manufacturers. This is found in everything from detergents to shoe polish, cake mixes to permanent waves.

A real cake mix in a toy set with miniature utensils and all the equip-

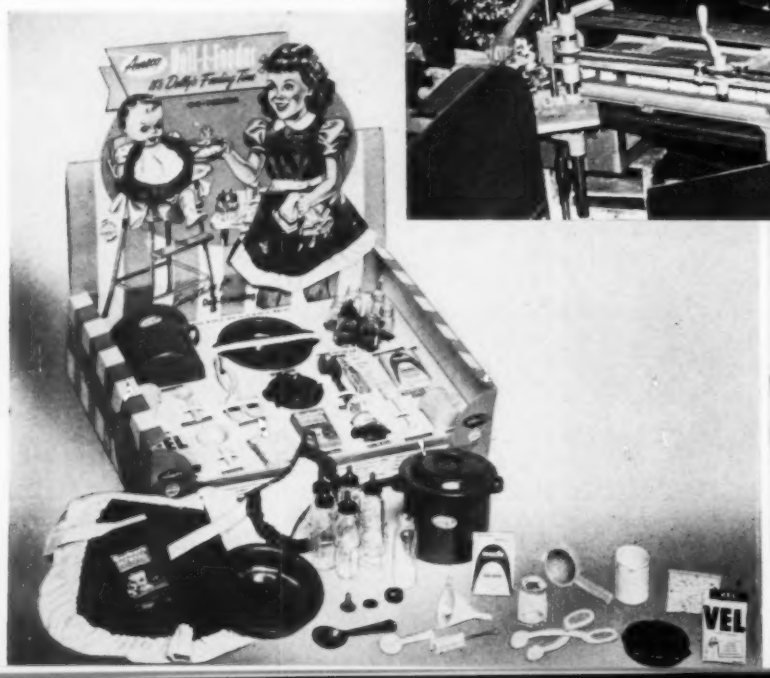
The trend to famous brand miniatures



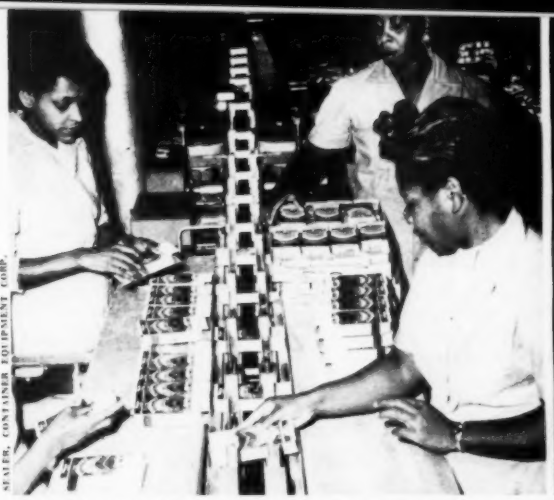
30 MANUFACTURERS are cooperating with American Metal Specialties Corp., a toy firm, to supply midget-sized packages for this toy-kitchen cleaning set, Doll-E-Feeder and supermarket shopping cart. Packages containing products are filled on specially built small-sized packaging machinery.



MACHINERY, TRINGLE PACKAGING MACHINERY CO.









SPECIAL SEALING LINE in the Model Craft factory in Chicago for miniature Pillsbury cartons that go into the Kay Stanley Cake Mix Set illustrated above. Pillsbury supplies bulk cake mix and the toy firm does the packaging.

ment to make a cake "just like Mama does" makes an impression because it is real.

The theory here is that the child thereafter will insist that her mother buy that brand and, as she grows up, will continue to prefer that brand through happy association.

"We consider the miniature packages to be good advertising," said a spokesman for one large food company, "but it's difficult to measure tangible results.

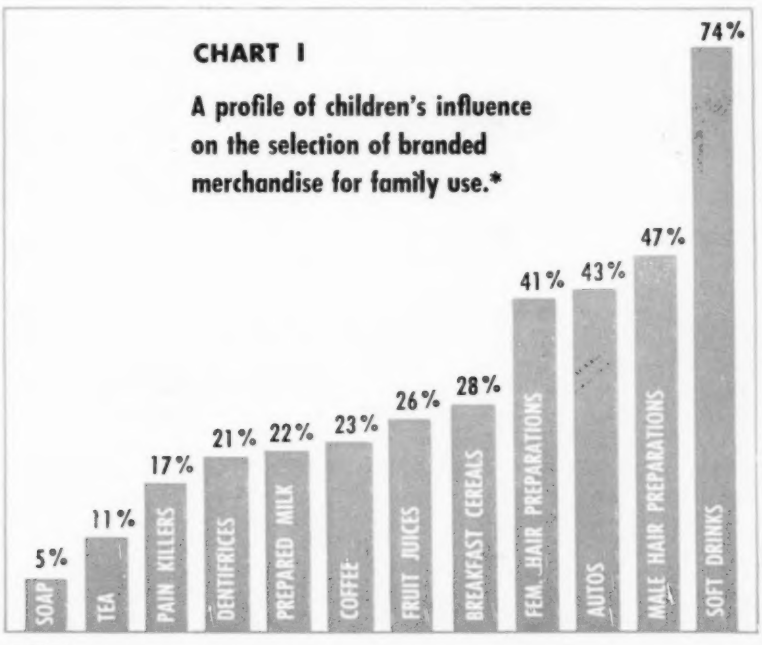
"All we know is that we couldn't get samples into the house any less expensively. Because of the cuteness of the toys and the samples, everybody in the house gets very conscious of the brand."

Herman Kessler, president of American Metal Specialties Corp., pioneer in the making of sample-including toy sets, whose company in eight years of its existence has come up to a leading position in the competitive toy business, says it wasn't always that easy.

It took four years to get five companies interested in the idea. Now Kessler's firm has more than 30 nationally advertised packages in its toy sets, with other firms constantly coming to them. American Metal Specialties has had to turn down a number because the products might not be safe for children.



DENTIFRICES and other toiletries have a good spot in toys such as this Pressman Toy Co. Play Dentist set, showing a carton for Ipana tooth paste.



* Reproduced from a pilot study, "Youth Influence on Family Buying Patterns," directed by Dr. Raymond Franzen and Prof. Harvey Zorbaugh, director of the Workshop on the Cartoon Narrative, New York University, prepared by *Puck—The Comic Weekly*. The pilot study was conducted primarily to develop techniques for further study on a national scale now nearing completion.

One of American Metal Specialties' first successes was a kitchen cleansing set called Kidd-E-Kitchen, which included filled miniatures of Colgate's Vel detergent, Ajax cleanser, Brillo, a glassine envelope-packed Cadie silver-polishing cloth, a DuPont-labeled cellulose dish-washing sponge, a Morgan-Jones dish cloth and dish towel, and a miniature Rubbermaid drainboard, plus plastic dishes, dish pan, sink strainer and other kitchen aids. Colgate liked it so well it is making other products available in miniature.

Other American Metal Specialties

Doll deals



BEAUTY AIDS in play-size packages are being teamed up with special doll promotions. Richard Hudnut's DuBarry doll, manufactured by Doll & Toy Industries, is being sold with make-believe DuBarry items and Richard Hudnut play permanent wave. Ideal Toy Co.'s Toni Doll with Toni Play Wave set has been a big success for several seasons.



toys include the Kidd-E-Nurse and Doctor sets containing Johnson & Johnson Band-Aid adhesive bandages and gauze, and a familiar Smith Bros. cough-drop carton; a Shu-Shine bank including two Shinola packages and a Doll-E-Nurser and Doll-E-Feeder which contain Even Flo baby bottles, tiny packages of Even Flo baby-bottle cleaner, miniatures of Gerber cereal packages and a sample of Vel. Possibilities for wide brand sampling in miniature are offered by American Metal Specialties' toy supermarket shopping cart which comes equipped with miniatures of Kellogg's Corn Flakes and Rice Krispies, Domino Sugar, Brillo, Kleenex, Ajax, Vel, Wildroot products, S.O.S. scouring pads and Mentholatum—with plenty of space in the basket for more big names.

In Chicago, Kay Stanley, founder and president of Model Craft, Inc., found a bonanza in a tie-up with Pillsbury Mills in developing a toy cake-mix set. The set contains real miniature packages of Pillsbury cake-mix flour together with child-sized baking pan, spoons, cup-cake tin, mixing bowl, egg beater, pan liners, etc., all scaled to working size for three-to-nine-year-olds. Through research the toy company and Pillsbury established the right dimensions and ingredient quantities so that the cakes would not become over-done in the regular baking time.

The importance of this packaging operation is indicated by the fact that a whole automatic packaging line has been set up for it. Pillsbury supplies the cake mixes in bulk and the packaging is done by the toy company, which also orders the replica miniature cartons. The mix is filled via assembly line into junior-sized cellophane bags which are sent directly to another assembly line to be packed three bags to each miniature Pillsbury carton. The boxes are sealed on a full-sized carton-sealing machine.

Two years ago, just before the cake-mix toy was introduced, Model Craft was reported to have done a volume of $1 million. The company is now on its way to a volume of $2½ million, mostly due to the success of the cake-mix set. And it is expecting that refill orders for the junior sizes of Pillsbury mixes will be enormous.

All manufacturers of branded packaged products, as well as the toy manufacturers, agree that sampling is more effective if the miniature packages can be filled with actual product for the child to use. However, there is disagreement as to whether this is feasible, some saying it is impossible to control the shelf life of foods packaged in a toy set and, therefore, is undesirable. American Metal Specialties includes no filled food packages, although it does supply filled packages of detergents, household cleansers, shoe polish and other non-edibles.

Johnson & Johnson supplies its miniatures already packaged, since it feels that they must be packed under the same rigid laboratory conditions as the company's regular sales packages. This kind of careful attention to detail gives assurance to prospective suppliers of branded samples that their packages and product will be used in the toys only in a manner to build good will and acceptance.

American Metal Specialties also has a completely automatic set-up for filling powdered products, such as household cleaners, into miniature cartons. The packaging equipment is reported to be a scaled-down version of standard packaging machinery.

Usual procedure in all the toy firms is to receive the miniature containers from the manufacturer of the packaged product, or to order them from package suppliers in accordance with the manufacturers' specification.

In the case of small cartons, production of the miniatures is a comparatively simple matter. If the package consists of a miniature can, however, the problem is sometimes a little more complicated. One of the large can companies has made some of these miniatures to assist an important customer, but in general, the can companies are not too anxious for the business because it is, at present, sometimes of insufficient volume to warrant necessary tooling up to make a special size.

Reasonable facsimiles of a can or unusual type of container may often be molded of plastic and covered with a paper label that gives a realistic effect, particularly when the containers are not to be filled anyway. Occasionally miniatures used for other promotions may be used in the toy sets. Gerber has a ½-oz. baby-cereal sample package which could easily be furnished for the toy promotions.

Manufacturers of beauty and good-grooming aids appear to be climbing on the young-market band wagon with toy-sized kits and packages of toiletries and cosmetics that tie in with doll manufacturers. This year Ideal Toy Co., which presented the very successful Toni doll a few years ago with a kit of Play Toni wave lotion, set and creme shampoo, has teamed up with Harriet Hubbard Ayer to promote a doll in combination with a carton-constructed dressing table containing a miniature assortment of Harriet Hubbard Ayer products.*

A few years ago Ideal also introduced the successful Miss Curity Nurse doll which is sold with a selection of small packs of Curity first-aid items. A hinged box made like a suitcase by Ideal Toy Co. is tying in with Butterick patterns, including a doll mannequin. The idea is to make a miniature dress for the mannequin, which later can be made in full size by buying the full-sized Butterick pattern packet that corresponds to the miniature.

Richard Hudnut has announced a 17-in. DuBarry doll, manufactured by Doll & Toy Industries Co., that is being featured in toy departments of leading department and chain drug stores across the country this holiday season along with make-believe DuBarry beauty items and Richard Hudnut "pretend" wave lotion, completely safe and tinted with vegetable coloring. Helena Rubinstein says, "We don't have a children's tie-in now, but we expect to next year." Shulton has two sets—one of Early American Old Spice in a re-usable sewing box and the other containing Friendship Garden items in miniature-sized packages—slanted to the pre-teenagers.

Makers of men's grooming aids have an opportunity of putting brand names across in small-fry barber sets. There are also toy dentist kits in which may be seen Ipana tooth-paste cartons.

For several years toy trucks have been carrying miniature packages of branded dairy products and the Coca Cola company apparently has been pleased to have its name on the miniature replica bottles that go into toy soft-drink trucks and stands.

The whole subject of package miniatures is not a new one, of course. Most grown-ups still remember familiar labels in toy grocery-store sets and kitchen cabinets of yesterday. There seems to be a more positive interest today, however, in developing brand consciousness that goes deeper into play patterns for toys that simulate more closely the

(This article continued on page 214)

* See "New Dimensions for Cosmetics," MODERN PACKAGING, Sept., 1953, p. 132.


FAB
FAB
FAB

Strip-packaged bearings

MPB now serves its industrial customers miniature bearings each sealed in a compartment of laminated film strip

Many manufacturers of industrial components are developing packaging that will expedite operations for the engineers and technicians responsible for the proper application of the components in machines and instruments. They are including this newer packaging approach in their "customer service" thinking.

One such company is Miniature Precision Bearings, Inc., Keene, N. H., originator of miniature ball bearings and manufacturer of the world's smallest radial bearings.

The company produces more than 140 types and sizes of miniature ball bearings—ranging from 0.100 in. to 9/16 in. O.D. Miniature Precision serves practically every basic industry and a wide range of specialty industries representing hundreds of companies. Altogether more than two million MPB bearings have been installed in precision mechanisms.

The extreme minuteness of MPB products has demanded exceptional packaging ingenuity. The problem of packaging these tiny and vital components may be more keenly appreciated when one considers that more than 300 of the smallest type may be accommodated in a teaspoon. And the total output for an average day from the Keene plant may weigh from just 9 to 15 lbs.

In its packaging MPB has had these two major objectives:

1. Provide maximum protection in transit.

2. Save time and motion at the receiving end.

Many industrial components have wrappings which adequately meet protection requirements, but cause untold annoyance on the receiving end because of their complicated design or cumbersome structure and lack of simple accessibility.

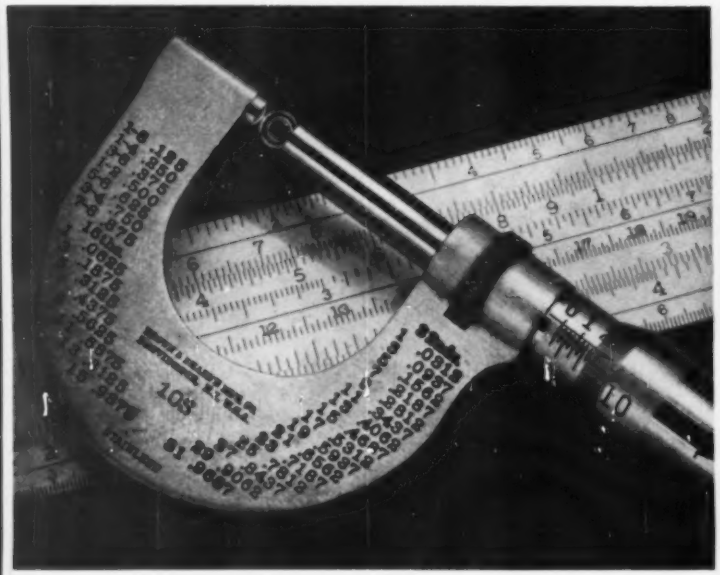
MPB's packaging has long been exemplary,* but, as with all good packaging, improvements are constantly being found.

For some time the standard practice has been to ship the bearings, pre-lubricated, in plastic tamperproof vials. According to their size and style, the bearings are packed 10, 20 or 25 to a vial—never more. Five or less of the sealed vials are then placed in a small, transparent plastic envelope and stapled into a form-fitting identification folder. Each bearing is of considerable monetary value and this technique has helped greatly in reducing loss and misplacement at the receiving end.

Now Miniature Precision Bearings has come up with an even more revolutionary concept for packaging these tiny components. It is one of the most

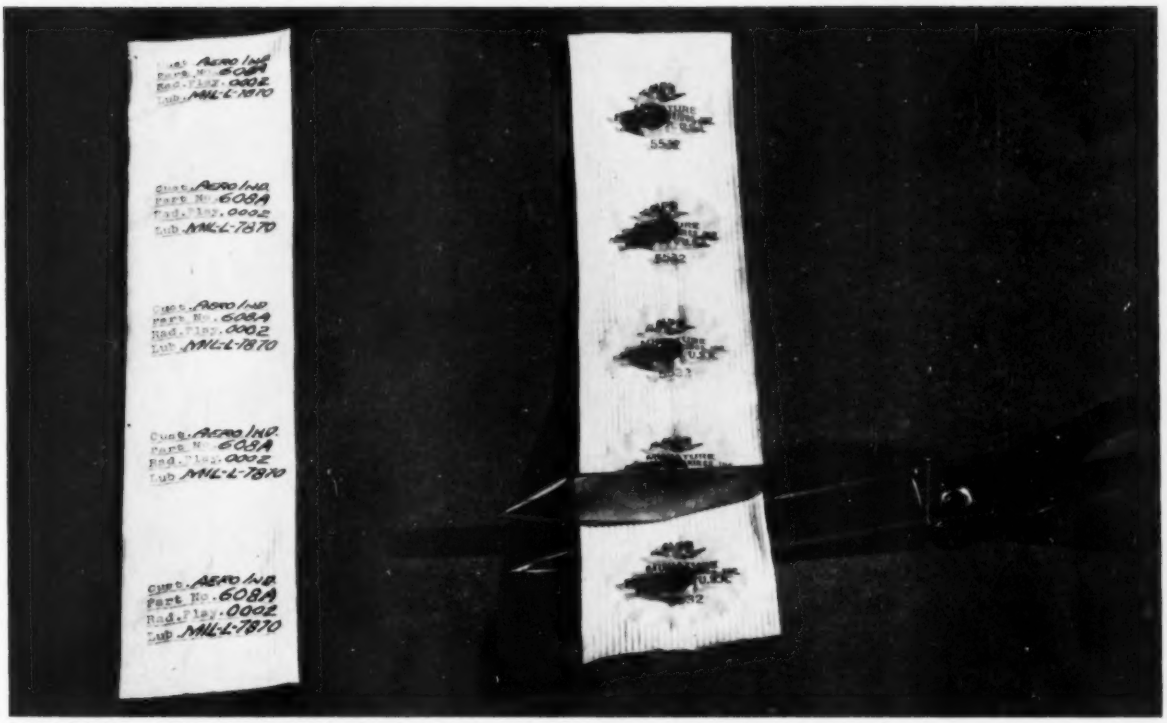
* See "Problem in Miniature," MODERN PACKAGING, Oct., 1944, p. 103.

INCREDIBLY SMALL size of these vital precision parts is pointed up by comparison with micrometer and slide rule. More than 300 of smallest bearings fit in a teaspoon. Total output from the Keene plant for an average day may weigh just 9 to 15 lbs.



FORMERLY, tiny bearings were packed in a sealed plastic vial and the vials sealed in polyethylene envelope stapled to an indentifying folder. Protection and identity might be lost after package was opened.





LIKE PILLS, each tiny precision bearing is sealed and protected in acetate-polyethylene lamination, may be cut off individually as needed. Acetate surface is printed and marked, on the back, with specific data on each bearing.

dramatic applications of strip packaging—long familiar in the drug field. Each pre-lubricated bearing is held secure in its individual, airtight pocket in a heat-sealed strip of transparent film. Each pocket is circular.

Four marked advantages distinguish this new "unit-pack" packaging:

(A) It reduces spillage and loss: the recipient engineer or technician may conveniently snip off one sealed pocket (containing a lubricated, ready-to-use bearing) at a time from the plastic tape.

(B) The color-coding feature gives at-a-glance material identification of the particular bearings contained therein. Chrome steel, stainless steel or beryllium copper—each may be identified by the color of the marking ink on the transparent strip.

(C) Number coding imprinted on each individual bearing pocket provides complete size, material and style identification. By the number SS518-FC, for instance, a stainless steel bearing of 5/16-in. outside diameter, ⅛-in. inside diameter, flange type, retainer type is indicated.

(D) There is additional information on each bearing on the reverse side of each pocket—customer name, part number, radial play and specific lubrication data or the lubrication date.

At present, the strip package consists of an outer sheath of film with an encased opaque backing. The film portion is a lamination of polyethylene and acetate—polyethylene on the inner side, to provide an inert contact with the bearings, and acetate on the exterior to facilitate heat sealing.

The acetate film also provides a surface that will assure permanency of the printed trademark and code numbers. The back of the package is printed with blanks which are subsequently completed, either handwritten or hand stamped for variable information. The film is printed before the packaging stage. Furthermore, this film tends to seal the polyethylene against permeation of the lubricating oil.

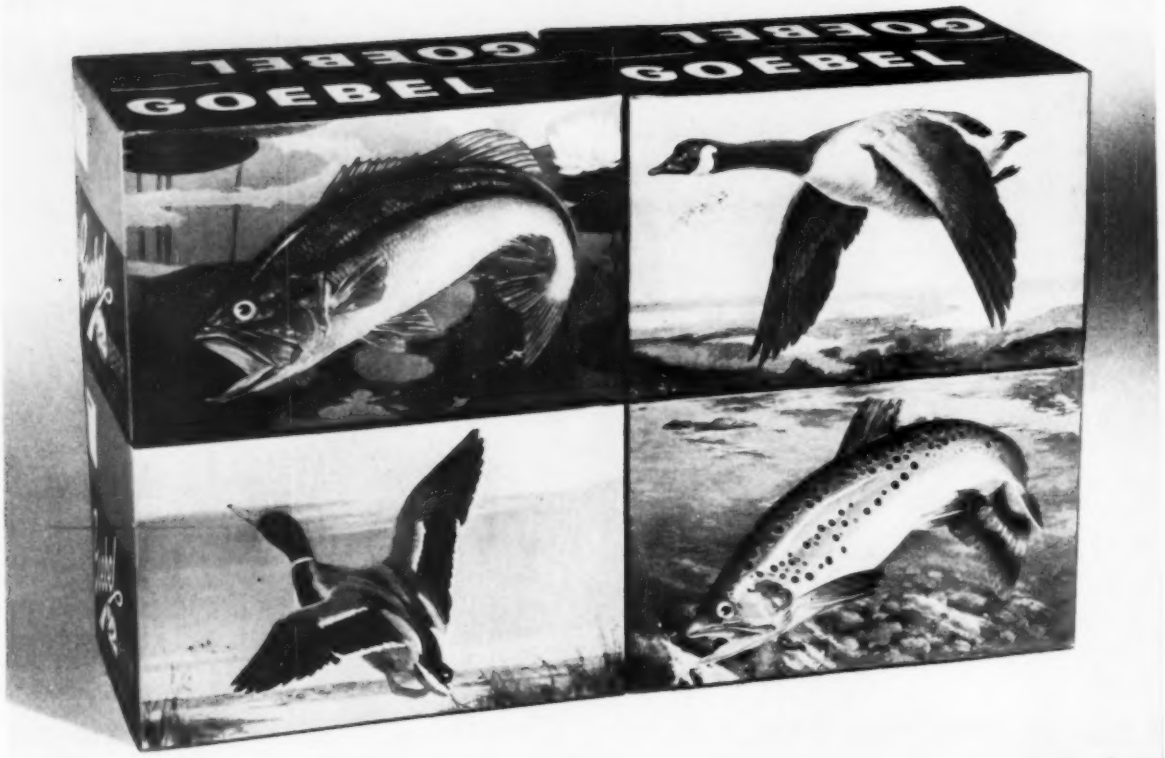
The interior strip or backing is a specially treated heavy-gauge opaque polyethylene. Rigidity is obtained by the use of a series of longitudinal mechanical seal patterns put in while the pack is being heat sealed.

The present version of the package is the result of more than a year's experimentation, including numerous life tests, with a wide range of materials, lubricants and packing techniques, to arrive at a material giving maximum life, good sealing qualities and easy identification.

Several "bugs" in the packing technique had to be overcome. For instance, the idea of ordering plastic film for the outer sheath in tubular form had to be abandoned because of difficulties in inserting the bearings and because of difficulty in obtaining a secure seal around the bearing compartment. Next, the idea of ordering the material in 3-in. strips had to be abandoned. The original plan here was to fold over the strip to arrive at the desired package width of 1⅛ in. Because of trouble in obtaining a straight, true fold it was decided to use two 1½-in. strips in the construction of the packages.

Front strips are printed (in ampule blue, red or green ink, depending on the bearing material) right on the premises. A machine designed to MPB's specifications enables the company to present the miniature bearings in unit-sealed, heat-sealed packages.

CREDITS: *Strip packaging machine, Wrap-Ade Machine Co., Inc., Belleville 9, N. J. Polyethylene-acetate laminated film, Standard Packaging Corp., 405 Lexington Ave., New York 17. Printing device, Markem Machine Co., Keene, N. H.*



PHOTO, CHAMPLAIN CO.

Fine art for beer

Goebel strikes a new note in merchandising with original paintings of fish and game beautifully reproduced by rotogravure on 6-can carrier cartons

Although it has barely hit the market, Goebel Brewing Co., Detroit, has already scored a smashing sales success with a new six-can beer carrier carton which is the first in this field to use full-color pictorial reproduction, the first to use rotogravure process printing and the first to use a high-quality bleached-kraft board.

Four different sporting subjects—a leaping bass, a fighting trout, a duck and geese in flight—are reproduced from paintings specially commissioned by Goebel. One entire side panel of each carrier carton, a space approximately 5 by 8 in., is devoted to one of these paintings, with case packing regulated so that two of each of the four subjects appear in each case.

So realistic is the fine rotogravure reproduction that customers, without any prompting, have been cutting out the carton panels and framing them, usually in sets.

The immediate response to supermarket and package-store test displays of these striking containers was a tripling of week-end sales of Goebel beer in cans. For the full month of September, Goebel production of beer in cans—to meet the stepped-up demand for the carriers—was double that of the same month a year ago. Strangely enough, Goebel bottled beer also seemed to benefit from the impact of the brand display.

The entire development, so unusual in this field where carriers have been regarded as utilitarian billboards, is significant of the general trend toward higher-quality package printing.[1] It is significant, also, of the tendency toward making the package itself the basis of eye-compelling displays, rather than depending up-

[1] See "The Trend to Fine-Screen Printing," MODERN PACKAGING, June, 1953, p. 99.

LIKE AN ART GALLERY is the display of Goebel's new 6-can packs, each featuring, on one entire side panel, a fine rotogravure reproduction of an original fish or game painting. These are the four subjects now being distributed, two of each design in each 48-can case of beer.

on banners, cards and other extra display devices, which today's crowded self-service stores frown upon.

For the last 10 or 12 years, Goebel had used a series of fish and game subjects in point-of-sale display material. The idea developed that the same type of illustration might be applied to the cartons.

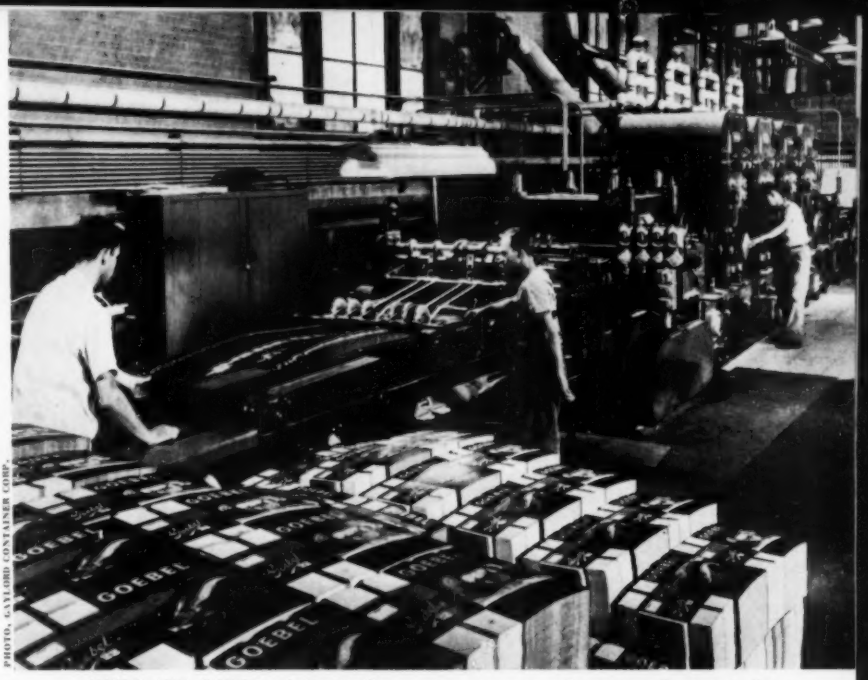
Goebel's search for a printer who could do such an exacting job on a heavy board suitable for a can carrier coincided with the installation by a St. Louis container firm of the comparatively new type of roll-fed, in-line rotogravure carton equipment which does a continuous, high-speed, automatic job, from the roll straight through to the discharge of die-cut, scored and stripped carton blanks, ready for set-up.

The economies inherent in this type of operation are such that Goebel found to its surprise that the new pictorial carton, using superior stock, cost no more than the conventional two-color letterpress carton it had previously used. The cost of rotogravure plates for this full-process carton was less than the estimated cost of letterpress plates for the same job.

Since this was the first job of its kind, a conference was held in Chicago, attended by the artist who painted the fish and game series, the carton manufacturer, the plate supplier and the ink manufacturer. At this meeting, problems which each supplier might encounter were discussed and the entire project from painting to printing was outlined to eliminate obstacles which might otherwise be encountered because of one supplier not being aware of the problems of the others.

So successful was this planning that the first run was made ahead of schedule. The ink manufacturer was due to be on hand at the pre-set

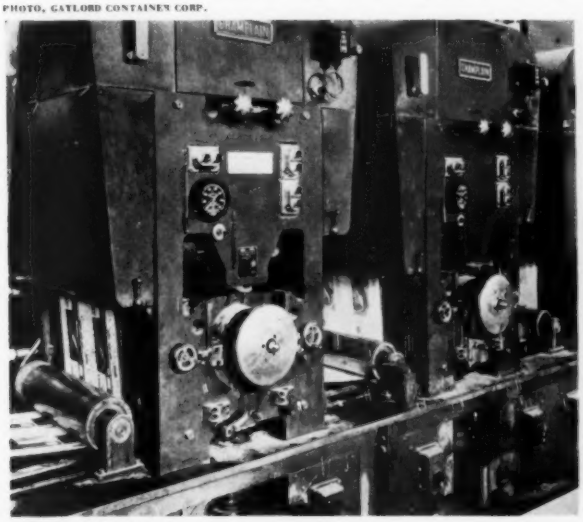
PHOTO, GAYLORD CONTAINER CORP.



OVER-ALL VIEW of the in-line rotogravure equipment, of recent development, which made the unique Goebel cartons possible. Kraft stock with bleached surface feeds from roll at the back, through the four roto units, cutter, creaser and stripper—all automatically operated. A million cartons are produced by supplier in a five-day, two-shift operation.

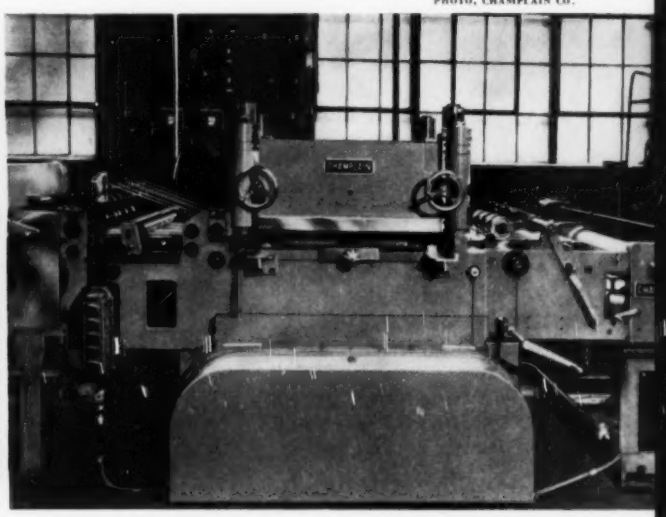
CLOSE-UP of three of the four precision gravure units showing the second, third and fourth colors being applied. The job is handled two-up throughout the operation.

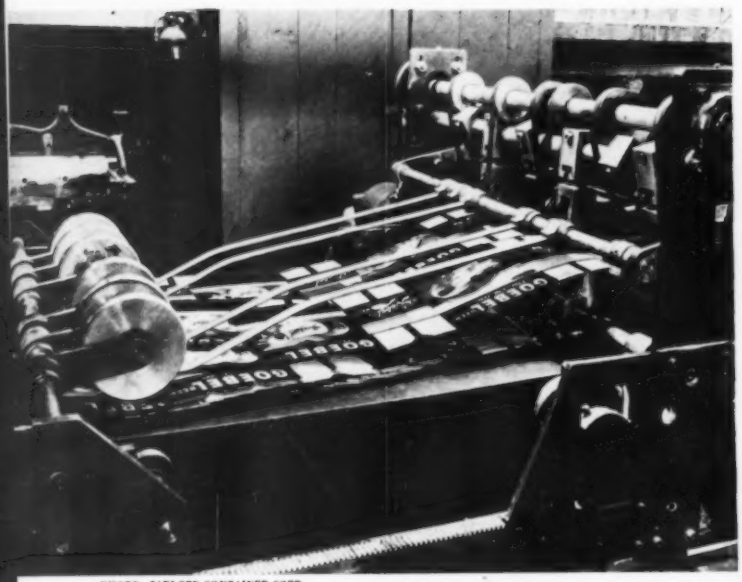
PHOTO, GAYLORD CONTAINER CORP.



AUTOMATIC cutting, creasing and stripping as an integral operation contribute greatly to economy of job reportedly no more costly than conventional beer carriers.

PHOTO, CHAMPLAIN CO.





PHOTO, GAYLORD CONTAINER CORP.

FINISHED BLANKS are discharged from stripper in shingle fashion to a slow-moving conveyor belt. As illustrated above, waste has already been stripped by rotating "pins" and pneumatically conveyed to the waste receptacle.



PHOTO, GOEBEL BREWING CO.

CASING IS AUTOMATIC. Two of each of the four designs go into each case, feeding from parallel conveyors.

starting date. When he arrived, however, he found that the first run was well under way and that no trouble whatever had been encountered. Everyone involved in this job agrees that much of its success is due to the pre-planning of the job all the way down the line.

The printing operation

The web-fed rotogravure printing equipment comprises a double-reel carrier, four gravure printing units, cutter-creaser, stripper and delivery belt. Printing in four colors, cutting-creasing and stripping in one pass of the web through the machine minimize handling, eliminate manual stripping and obviate duplication of equipment. Tension, temperature and humidity are the same for all operations, making for better quality control.

While it is not usual to think of rotogravure as an economy method, it is pointed out that if flat-bed letterpress were used for this particular job, five or six colors would be required, meaning that three two-color presses would be needed. Waste (due to color-registration problems not encountered in the controlled web feed), handling between presses and other waste time and motion, such as transporting to the cutter-creaser and stripping manually, plus additional make-ready time, would make the job prohibitive in cost.

If rotary letterpress were used, the cost of curved electroplates would, it was estimated, bring the plate cost several hundred dollars above that of rotogravure plates. On the rotogravure equipment, the Goebel carton is printed two-up.

Rotogravure, of course, is a high-speed method. The Goebel cartons are printed at the rate of 1,000,000 in five days on two-shift operation.

The board used is 0.020 bleached-kraft face with natural-kraft back, all virgin pulp. While rotogravure is an advantageous process for board, because it accommodates variations in caliper inherent in board stock, the present operation marks the first time, so far as is known, that it has been applied to a bleached-kraft board.

The reciprocating-type cutter-creaser cuts and creases the printed web by stamping down on the web as it passes beneath the inexpensive wood block or jig dies located in a rigid reciprocating chase. A pull unit and compensator change web travel from continuous flow to an intermittent flow, enabling the reciprocating platen of the cutter-creaser to cut and crease as the web passes under it.

After cutting and creasing, rotating "pins" strip the waste which then is pneumatically conveyed to a waste receiver. Stripped cartons are discharged in shingle fashion to a slow-moving delivery belt. They are then stacked on skids or pallets and taken to machines which perform forming operations.

Goebel's operation

At the Goebel plant, an unexpected advantage was gained in the cartoning operation. Previously, ink from other types of printing would rub off and accumulate on conveying and cartoning machines, requiring periodic clean-up. The rotogravure inks thus far have not presented this problem.

Goebel's cartoning and casing are mechanized. Eight of the six-can packs are placed in a corrugated case, each case containing two of each of the four designs.

To assure the right sequence of cartons through the cartoning ma-

chine, the carton flats are first collated manually. Two dissimilar designs are alternated in placement on each of the two parallel conveyor lines feeding the cartoning operation. When the filled and sealed six-packs arrive at the casing machine they are still in proper order on parallel conveyors, so that the automatic caser may shove four dissimilar cartons at a time into the shipping case.

Eye appeal

An idea of the appeal of these cartons can be gained from the fact that an entire skid load just disappeared from the printer's plant during the first run. Subsequently, cut-out scenes began to appear in plant locker rooms, under desk glasses and on bulletin boards. Silhouette cut-outs of fish were hung on light cords.

On the back of each six-pack carton appears the unusual and colorful Goebel symbol—an imaginatively conceived bantam rooster having for a body a hollow-stem, Swedish-style beer goblet. The bantam came in during the 1930s, when Goebel was first to introduce the small 7-oz. bottle nationally, and his appeal was such that he was soon adopted as a trademark for all company packages and promotion. The bantam, or "Brewster," as he is called around Goebel, serves the need for a universal symbol, since Goebel distributes in widely separated territories (having a brewery in California as well as three in Michigan) and is known by different packages in different sections.

Six-pack cartons are being produced on the West Coast by lithograph, showing the "Brewster" on both sides of the carton. This process requires six colors. The fish-and-game series shortly will replace the bantam on one side of the Western six-pack.

Eventually, the new carton will be printed in eight different sporting scenes. Four of these will be used during the spring-summer months; the other four during the fall-winter months. The spring-summer series will show four fish—small-mouth black bass, large-mouth black bass, rainbow trout and German or brown trout. The fall-winter series will include scenes of mallards, Canada geese, English springer spaniel and pointer. The two additional fish are almost ready and the two dogs are in the art stage.

Goebel expects this carton to enable it to obtain full national distribution of 12-oz. cans. Already, the 12-oz. cans are selling in locations where such cans never sold before. Some distributors can't get enough supplies to fill their orders. One in Massachusetts has just put in the largest can order he ever entered and can't get supplies delivered fast enough to meet demand.

It does not take too much imagination to envision this type of display-package appeal spreading to other types of products, just as the multiple-can carry carton itself is spreading to baby foods and other canned foods. Rotogravure printing of this type would make possible the same kind of full-color appetite appeal on cartons that is now confined to food-can labels.

The Goebel carton already has created a stir. Shortly after it reached the market, the rotogravure-press manufacturer began receiving calls for interviews from people who, he says, had previously granted only courtesy calls. The ink manufacturer reports that two days after the first run in St. Louis, another customer had sample cartons in Philadelphia. Other beer packs are being run on the St. Louis press, although none is as ambitious in concept as the Goebel design.

CREDITS: *Six-pack cartons produced by Gaylord Container Corp., 111 N. Fourth St., St. Louis 2, Mo., using rotogravure equipment manufactured by Champlain Co., Inc., 88 Llewellyn Ave., Bloomfield, N. J. Inks, Commercial Ink & Lacquer Co., 8-10 22 St., Fairlawn, N. J. Plates, Southern Gravure Service, Inc., 301 W. Main St., Louisville 2, Ky. Original paintings, George Shepherd, Detroit, Mich.*

MASS DISPLAY of new cartons appears to be alive with fish and fowl. Interspersing cartons with trademarked side turned outward (Goebel "Brewster") is all that is required to give product and brand identity.

PHOTO, GOEBEL BREWING CO.



Packaging's Hall of Fame®



KENDALL
MOTOR OIL

FIFTY-EIGHTH OF A SERIES

It was the winter of 1932, at the height of the depression. An unpretentious-looking man in a battered Model T Ford drove up to a gasoline station in a small Pennsylvania town.

The station attendant, while filling the tank with gasoline, asked if he might check the oil. That was a good idea, the driver told him, and. if it's low, please make it Kendall E-30. The level was exactly 1 qt. low, a fact well known to the driver.

After the custom of the time, the attendant retired to the back of the station and returned a few minutes later with a "milk bottle" filled with oil, supposedly Kendall 30, which he had pumped from a drum. He proceeded to pour it into the crankcase —or so he thought.

The unpretentious-looking man was not a Sunday driver; he was a researcher for the Kendall Refining Co. of Bradford, Pa. The crankcase in his Ford was far from being conventional; it was rigged so that any oil being added would be detoured into a special container which was later removed, sealed and sent to the Kendall laboratory for testing.

Was it really Kendall oil? And was it the grade requested?

Over a period of two years, visiting gasoline stations in Ohio, Pennsylvania and New York in this way, the samplings gave the company conclusive evidence in support of a grave suspicion. In 43% of the cases either an inferior grade of oil had been substituted by the attendant, or an incorrect grade inadvertently or deliberately supplied to the purchaser.

Through this realistic plan of "go out and find out," Kendall was convinced that the abuse of substitution—then the greatest problem in selling motor oil—demanded drastic countermeasures. It was the company's answer—one of the bravest and most significant moves in the annals of packaging—that qualifies it for nomination to *Packaging's Hall of Fame*.

Kendall decided that it was time, right then and there, to stop worrying about possible objections to a refinery-sealed unit package. Some of the larger oil companies had, for some time, been studying the possibility of using cans and a couple of them were, in that winter of 1932-33, trying them on a test basis. But when Kendall Refining Co. announced in a *Saturday Evening Post* spread on April 29, 1933, that henceforth every quart of Kendall oil to be sold to motorists would be packaged in a refinery-sealed can, it became the first company to go all-out, nationally, for the kind of packaging that within a short time revolutionized distribution practices in the motor-oil industry.*

Thus it was a small company that took the giant step. Although the name and high quality of "The 2,000-Mile Oil" are known from coast to coast, Kendall's refinery, nestled in the hills in the heart of the Bradford, Pa., district, refines only about 5,000 barrels of oil per day. As sometimes happens in packaging, a small company with less at stake in the way of outmoded inventories and equipment could move faster and more decisively on a revolutionary packaging change.

But that explanation takes nothing of credit away from Kendall.

HISTORIC FIRST for Kendall was announced in this *Post* spread of April 29, 1933. Other refiners had hesitated over the use of cans.


KENDALL scores Another First!..

Now...IN REFINERY SEALED CANS....

prevents FEAR OF SUBSTITUTION ...defeats DIRT AND DUST

KENDALL The 2000 MILE OIL

KENDALL THE 2000 MILE OIL

*MODERN PACKAGING said, in its issue of December, 1935: "The Kendall Refining Co. was the originator of sealed cans for motor oil and led the field in the change from oil in drums to oil in sealed containers."

NOMINATED TO PACKAGING'S HALL OF FAME BECAUSE:

- **First to adopt the refinery-sealed quart can, it led its industry into modern unit-packaging practices, ending bulk selling of motor oil.**
- **It pioneered the use of the combination can opener and pouring spout, which made cans practical for oil.**
- **It proved that true economy lies in volume production and sales, which the motor-oil can effected.**
- **It carried the fight that put a stop to substitution and adulteration of product, demonstrating the highest principles of packaging.**

Oil was possibly the last of the great consumer commodities to make the transition from the worst evils of cracker-barrel merchandising to truly modern packaging of the highest type. And, with Kendall's leadership, it did it almost overnight.

As Kendall pointed out in its trail-blazing *Post* ad, the can "eliminates all fear of substitution . . . protects the purity of the oil from refinery to you (no dirt and dust can get in) . . . and makes certain that you get the right grade of oil for your car. Surely this is the safe way, the clean way, the sensible way to buy motor oil."

Kendall's customers agreed and its competitors were forced to agree. Within a matter of months, the old drum-and-pump method was largely scrapped and almost every major brand of motor oil appeared in cans just like Kendall's. The 1-qt. size was used by Kendall from the start and within a very short period the 5-qt. can was introduced. This became the industry practice.

It was quickly apparent to other companies, as it had been to Kendall, that the lithographed can not only protected the product, but gave ideal brand identification both on display in the filling station or garage and right up to the crankcase fill pipe —a point on which merchandising previously had been very weak.



TODAY'S PACKAGES include a brand new one for a new product—SuperB Kendall, a super-quality premium oil. SuperB has a silver-gray background, with a red oval and white lettering. Otherwise, the Kendall Oil label design hasn't changed substantially in 20 years.

The time was ripe

Of course, the motor-oil can was a natural product of its time. Depression-ridden dealers were worried about competition from price-cutting grocers, druggists and department stores, who were already selling 2-gal. quantities of motor oil—although not single quarts—in varnish-type cans. Big-brand producers were troubled by the substitution bugaboo and the

POUR-SPOUT OPENER was pioneered by Kendall, made the can practical for motor oil.



ABOUT OUR COVER

The background for our cover illustration of today's Kendall Motor Oil can is reproduced from an original painting by John Gould, showing the first distillation of Pennsylvania oil by Samuel M. Kier of Pittsburgh, in 1859. The painting was originally made for an advertisement of Lukens Steel Co. and has since been donated to the School of Mineral Industries of Pennsylvania State College, where it is now on display. The Kendall can has been associated with this scene for our own purposes of illustration; it has no connection with the painting, nor Lukens Steel.



ANTECEDENTS of present-day Kendall motor oil can go back to the horse-and-buggy days. Later, in the early days of autos, Kendall used a gallon tin, square shaped to fit the running board of a car.

resulting loss of consumer confidence in their products. Kendall, as a producer of finest-quality Pennsylvania oil, had greater cause for apprehension because of its higher price.

The late Otto Koch, the modern-day builder of the Kendall organization from a company operating on 10 barrels of crude oil to 5,000 barrels a day, was the innovator with the vision and imagination equal to this problem. Mr. Koch, who came to Bradford in 1887 from Dunkirk, N.Y., to set up an undertaking business and was later elected president of the Kendall Refining Co., entered the management in 1906 when the company was in dire straits.

Founded in 1881, the Kendall Refining Co. was taken over by the Penn Lubricating Co. in 1902 and continued operations under the former name. Four years later Mr. Koch, a stockholder in Penn, became a director, secretary, treasurer and manager of Kendall. In the same year a disastrous fire swept over all tanks and buildings, leaving only a new wax plant. A program of modern construction begun after the fire has never stopped.

In the pre-automotive days of course, the products were such things as Kendall Axle Grease, "the horse's friend"; Kendall Water White Sunshine Oil; kerosene for heat and light, and oil for the cylinders of steam engines. The automobile age brought new opportunity, additional capital and progressive management, vitalizing the company during Mr. Koch's tenure.

The tireless, colorful Otto Koch was an executive who was said to be personally capable of performing any job in the refinery; one who thought nothing of slopping in the mud of a new well with his men, or sleeping overnight on a cot in the refinery when there was a crisis. He therefore met the challenge of selling motor oil under the trying conditions of the '30s with the imagination and forcefulness which characterized his earlier molding of the company itself. He noticed the great transformation in the grocery store as it replaced the old cracker-barrel selling with the individual, sealed package and in this marketing reformation he saw the parallel with the selling of motor oil.

Over the years consumers had learned that the tin can, in which they had been buying all kinds of foods, was tamperproof and sanitary and thus they had built up a confidence in this form of packaging. Why couldn't the sealed tin container be adopted by the motor-oil industry?

Before any action was taken, Kendall made the two-year check of gasoline stations previously described. Then, to test consumer reaction to the quart can, distribution was made on a limited basis in five cities. There, the refinery-sealed can, opened before the eyes of the purchaser, proved to be an effective selling agent and the only real answer to substitution. Consumer reaction to this new way of buying motor oil was fast and enthusiastic.

In the dead of winter in one northern New York town (cars were used less frequently on winter days then), one dealer reported a 100% increase over the gallonage for the same period the year before. Other sections in the same territory, still using the milk-bottle type of dispenser, registered sharp sales decreases. By the end of 1932 the marketing test had proved so successful that Kendall moved to put the plan into effect immediately. It reached its decision and placed its first big order for cans and canning equipment in January, 1933.

Being the first national marketer in the field with a sealed can gave Kendall a big edge over competitors. It helped to spread and consolidate its already-active program of national distribution.

Collateral advantages

In addition to its obvious advantages for the consumer, the can created numerous tangible advantages for the dealer. He could reduce his storage space by eliminating the 55-gal. drums he had previously needed for all the different grades of oil. The small dealer could carry an adequate stock of the four essential grades of Kendall oil in quart and 5-qt. cans and still have less money tied up, possibly, than he would have in a single drum. He was spared the time-consuming job of pumping oil into bottles and the discrepancies that sometimes occurred from leakage, inaccurate measurements and pilferage. He could, in short, keep his investment low and keep better track of his stock.

For the first time dealers throughout the country had a *package* for motor oil—and one that offered real merchandising possibilities. Eye-catching displays of cans could be built on the gasoline-pump islands to draw attention to the Kendall name and help the dealer's selling efforts. Mindful of these possibilities, Kendall planned a program of advertising and promotion to sell the company name and the advantages of the new can. Featured concurrently with the opening *Saturday Evening Post* ad were local newspaper advertisements, listing the names of dealers, and road signs, radio commercials, station banners and all the paraphernalia of persuasive selling that Kendall's advertising department and agency could conceive.

By the time other oil companies had adopted the refinery-sealed can, one large can supplier had devised a nationwide contest with prizes for deal-

ers who erected the most ingenious displays of motor-oil cans. Having already observed the differences in their sales, thanks to the can, dealers took to the idea with enthusiasm and before long motorists were viewing almost incredible objects fashioned out of cans, including men, airplanes, houses, windmills and locomotives. A Kendall dealer who built a house out of cans walked off with first prize.

The package itself has ever since been one of Kendall's best advertising devices. It is a rare credit to the designers, who have unfortunately faded into obscurity, that the original design was so expertly contrived as to weather the marketing trials of two decades with no basic change. The strongest mark of the container is its simplicity, with a large, circular white trademark against the red background featuring two fingers and, printed in red outlined with black, the words, "Kendall, The 2,000 Mile Oil." The 2,000-mile slogan has always been Kendall's strong selling point, since the oil, refined from 100% Bradford crude, is said to be good for twice the mileage normally recommended by other refiners.

Additional copy, printed white on red between the front and back trademark, now points out that the oil is "refined and reinforced with carefully selected additives for passenger car, Diesel and heavy-duty gasoline engines"; features a seal indicating that Kendall holds Pennsylvania Grade Crude Oil Assn. permit No. 3 and guaranteeing the product as being refined from 100% Bradford, Pa., oil. Also are given net-contents information and a reminder that the can is refinery sealed.

The one noticeable change ever made in the design—the addition of a white-on-black band at the top and a white-on-red band at the bottom of the can—was made solely to foil a new brand of bootlegger who flourished before the war. Kendall, along with all the oil refiners, thought they had seen the last of unscrupulous practices. But a group of racketeers had hit on the scheme of shearing off the punctured tops of empty cans, filling them with an inferior motor oil, re-capping them and sealing them in the guise of the Kendall can at a lower price. With the printed bands hugging both the top and bottom edges of the cans, it became impossible to do this without cutting part of the printing away, thus exposing the counterfeit.

Line illustrations of the various types of vehicles for which Kendall



DISPLAY of brand name was a fundamental merchandising advantage of the can. Kendall supplied racks from the start,



KENDALL REFINERY, in the hills in the heart of the Bradford district of Pennsylvania, has grown since its beginning in 1881, but still remains a midget in this industry of giants.



KENDALL FAMILY, other than automotive motor oils, includes the well-branded packages illustrated above. Collapsible metal tubes are used for the packaging of outboard gear grease and hypoid gear lubricant.

oil is recommended (car, truck, bus, plane, boat), printed in white on a black band directly above the red-and-white band at the bottom of the can, have been kept up to date. The addition of the words "motor oil" in black on the side of the can, a recent change, was made in conformance with a California law requiring the words "motor oil" in letters at least ¼ in. high on this size of package.

In all of Kendall's packages, which range from an aluminum tube for outboard-motor grease to a 55-gal. drum for bulk motor oil, an effect of family relationship is achieved with standard black, red and white colors. Dominating each of the containers is the same type of oval trademark spot as on the motor-oil can, except that some containers use white on red instead of red on white.

Sales strategy

Selling a measured quantity of oil in a sealed container, as opposed to bulk, naturally made some difference in costs. In fact, every can was overfilled to assure full measure. But, confident in the success of their new venture, the Kendall organization was content to absorb the extra cost; this, they felt, would be minimized by later increases in volume—and so it was. Thus the Kendall story proves out another of the basic premises of packaging.

While shouldering none of the cost increases, franchised distributors who sold retail outlets throughout the country did share in the responsibility for promoting the new idea and saw to it that dealers were equipped with sales aids and opening devices for the new cans.

The latter point was important. One of the questions holding back other oil companies who had considered adopting the can was a belief that hurried station attendants would not fuss with a can opener plus a funnel, in contrast to the milk-bottle-type containers with spouts that were ready to pour when picked up. Kendall acted immediately when Continental Can Co. came up with a combined can opener and pouring spout—the familiar gadget that is now used in every filling station in the country.

In the early days dealers were instructed to punch the bottom of the can so that, while the oil was draining into the crankcase, the top of the can, embossed with the grade designation, would be visible to the driver. Because grade substitution is all but extinct in the modern era of the sealed can, this practice is no longer deemed necessary and the top is generally punctured.

Kendall oils, lubricants and other products are today sold through franchised distributors covering territories throughout the United States, Canada and several foreign countries, servicing retail outlets. In a 100-mile radius of Bradford the company owns or leases stations, operating under the Kendall name, which are outlets for the company's Polly Power and De Luxe gasolines. But the growth of the chain variety of service station, owned or leased out to operators by the large oil companies, tended to modify the company's distribution pattern.

In Kendall's promotional literature, dealers are told that they can attract regular service customers by offering the company's high-quality products and can sell car owners on a complete

Kendall lubrication service. Dealers are encouraged to sell a few extra cans to carry in the trunk, in case the car owner should take a trip where this brand may not be readily available. This is not a new idea, but goes back to the early days when extra can sales were a big-volume item before distribution was as widespread as it is today.

Early this year Kendall decided to push extra can sales anew by borrowing the idea of the take-home container from the beer field for selling six 1-qt. cans as a unit. As far as is known, it is among the first motor-oil marketers to adopt this up-to-date packaging idea.

Kendall's packaging program has seen a steady growth through the years with the addition of many new products and new packages.

Kendall also was among the first to adopt the so-called "tinless" can, which is now generally used throughout the industry. It is a black-metal can—adequate for motor oil—with a side seam sealed with a special adhesive rather than solder, thus eliminating tin even in the solder. It has the advantage of providing unbroken lithography all around the can. Previously, lithography could not be applied in the seam area. Lacquered ends and the coated seams prevent rusting, which had been a problem in filling stations where racks of cans may stand out in the rain. By standardizing on the tinless can, the motor-oil industry has placed itself in a stronger position in case of emergencies which may restrict our tin supply.

The newest star in Kendall's merchandising firmament also represents its most noticeable departure in package design in 20 years. Kendall Super-B Motor Oil, introduced in September of this year, is the first all-weather combination SAE 10W-20W-30 motor oil on the market. It is a high-detergency, additive-treated, premium-priced oil developed especially to minimize combustion-chamber deposits which cause knock in high-compression engines and to eliminate persistent hydraulic-valve-lifter sticking. Selling for 65 cents a quart, it was believed desirable to have a distinctive package and Kendall achieved this by dropping the traditional red background of its can label in favor of a silver with white star-gleam highlights. Family resemblance is maintained by keeping the oval trademark spot, which in this case is red with white lettering: "SuperB Kendall Motor Oil."

The complete line of Kendall branded oils and lubricants is supplemented by a number of specially packaged products such as Kendall Lock-Ease, Door-Ease, RuGlyde and Household Utility Oil. A special lubricant for outboard-motor gears is put up in a 13-oz. aluminum tube which, due to its nozzle, makes dispensing simple.

Installation of a canning line gave Kendall no particular trouble. So much experience had been amassed by the can companies in packaging canned foods that the application to oil was made without any serious hitches. Today, Kendall uses filling, sealing and casing equipment which is generally standard in the industry. The most important line, that for the 1-qt. can, can reach a top speed of 450 cans a minute, though for practical purposes it usually runs at about 330 per minute. A similar line running at a lower speed is used for the 5-qt. cans.

Closing machines are equipped with an embosser to designate the S.A.E. grade of oil and the A.P.I. service classifications for which the oil is recommended.

The canning of motor oil has become a routine, standardized, mass-production operation, in which—so far as volume is concerned—Kendall is a midget among giants. But the stout little refinery in Bradford, Pa., will always be remembered as the one that stepped in where others feared to tread and led its whole mammoth industry into modern packaging practices. The place of Kendall Motor Oil in *Packaging's Hall of Fame* is secure.

CREDITS: *Cans, Continental Can Co., Inc., 100 E. 42 St., New York 17; Crown Can Co., Erie Ave. & H St., Philadelphia 34, Pa., and American Can Co., 100 Park Ave., New York 17. Six-can carry carton, Hinde & Dauch, Sandusky, Ohio. Aluminum tubes, A. H. Wirz, Inc., Fourth & Townsend Sts., Chester, Pa.* ***One-quart line:*** *Filling and closing machine, Continental Can Co.; casing machine, Chisholm-Ryder Co. of Pa., 218 E. Chestnut St., Hanover, Pa.* ***Five-quart line:*** *Filling machine, Food Machinery & Chemical Corp., Sprague Sells Div., 101 E. Maple St., Hoopeston, Ill.; closing machine, Continental Can Co.; casing machine, Standard-Knapp, division of Emhart Mfg. Co., 127 Main St., Portland, Conn. Conveyors on both lines, Standard-Knapp. Shipping containers, F. J. Kress Box Co., 1–28 St., Pittsburgh 22, Pa.; Fort Wayne Corrugated Paper Co., 130 E. Douglas St., Fort Wayne 1, Ind.; Northeastern Container Co., Bradford, Pa.; Robert Gair Co., Inc., 155 E. 44 St., New York 17, and Container Corp. of America, 38 S. Dearborn St., Chicago 3. Folding cartons for aluminum tubes, F. N. Burt Co., Inc., 514 Seneca St., Buffalo 4, N. Y.*



SPECIAL OILS for Diesel and industrial engines use imprinted rings on top, differentiated by color for various applications. Stock body of the can makes for economy.



CARRY CARTON —an idea borrowed from beer field — enables Kendall users to keep six-can supply in trunk of car. This enables Kendall to compete with more widely distributed major brands.

Design



Stronger, brighter packages on the candy counter

How effectively a surface redesign can step up counter appeal is illustrated by new packages for Katherine Beecher Butter Mints. Brand name, although the same logotype has been retained, stands out more boldly now in a white panel across the center of the package. Addition of the mint-leaf design points up the type of product. At left is the new 14-oz. flat tin; a similar package has been adopted for the 7-oz. size. The center illustration shows the new gift carton, printed in green, gold and white. The company's entire line, covering seven different butter candies, is being redesigned and the Butter Mints, mainstay of the line, sets the theme for the others.

CREDITS: *Design, Dick Beyer, New York. Cans, American Can Co., New York, and Liberty Can & Sign Co., Lancaster, Pa. Window carton, Simplex Paper Box Corp., Lancaster, Pa.*

Visual appeal sells hobby pencil-painting set



The cover of this set-up box for the Eberhard Faber Pencil Co.'s "Paint with Pencils" new water-color set for the amateur reproduces in full color the six pictures in the set that can be painted with the enclosed Mongol colored pencils. By illustrating the six scenic pictures as they will look when painted by the purchaser, the thought is conveyed that "you, too, can be an artist." Pencil painting, a pastime that is fast becoming popular with all members of the family, is being promoted by Eberhard Faber with this set in an intensive campaign aimed at all members of the family. The sturdy box contains a complete 23-piece kit: six 8-by-10-in. pictures ready to paint, a full-sized working frame, 12 Mongol water-color pencils in a flap-opening box, a water tray, camel-hair brush, special sharpener and a painting guide. A die-cut and scored inner tray is designed to hold each of the items in a neat, orderly arrangement.

CREDITS *Box, Musto Paper Box Co., North Bergen, N. J.*

Histories

Sampler unit acquaints shoppers with 10 Cointreau liqueurs

Ten miniature bottles filled with 10 different assorted flavors of liqueurs and cordials are packaged by the Cointreau Co., Ltd., in this unique merchandising unit—a four-color lithographed hinged carton with acetate windows, each of the two sections clearly displaying five different flavors. Each bottle is rigidly held in position, both top and bottom, by die-cut and scored paperboard inserts, which slide into each of the two carton sections. When the companion cartons are hinged together, they form a single carton. The package may be merchandised as a single unit or the halves separated and sold as two individual units. The 100-yr.-old firm has long been known for its Cointreau liqueur, but it was not generally known that the firm makes 19 other different cordials. To reach and educate this market, the packaged assortment was introduced. The set is also reported by the company to be fast becoming popular as a gift item.

CREDIT: *Carton, Stecher-Traung Lithograph Corp., Rochester, N. Y.*



Space-saving detergent packets for world travelers

A welcome convenience for travelers is this "suitcase" carton of "Trip-Suds"—individual, one-time-use packets of detergent, each containing just the right amount of product to make a basinful of suds—distributed by Doyle-Decker, Inc. The "suitcase," complete with carrying handle, is printed with travel stickers of well-known historic spots in New York, London, Egypt, Italy and France. A travel tag, also printed on the suitcase carton, tells the shopper that enclosed are "20 individual Trip-Suds packets." An oval in the lower left corner calls attention to an extra introductory gift of a handy midget plastic clothes hanger enclosed in the package.

The individual detergent packets are formed from pouch paper with a polyethylene coating, printed and heat sealed. They are a convenient size to tuck away in the tiny spaces available in the traveler's luggage.

CREDITS: *Cartons, A. Fleisig Sons, New York. Pouch paper, Reigel Paper Corp., New York.*



ICE-CREAM-SANDWICH



PRODUCED on a combined sandwich maker and wrapper, approved by New York Board of Health, this sandwich sets a standard for mechanization which probably will meet requirements anywhere in the United States.

The ice cream sandwich—a big-volume product rising in popularity, but heretofore squeezed by high production costs—has reached a milestone in its progress with Swift & Co's new production line at its Brooklyn, N.Y., plant, which both makes and packages the long type of 3-oz. sandwich on a single machine at a speed of about 100 a minute.

This is a mechanization milestone in the ice-cream industry not only because it is a triumph over what has been generally a costly packaging procedure, but because it has won the stamp of approval of the New York City Board of Health, whose decisions usually serve as a criterion for other municipalities.

The basis of Swift's improved operation is a new machine adapted from a long-established butter print-maker and wrapper, which has delivered the company from the handicap of a line capable of only 50 sandwiches a minute. Speed has been more than doubled through the elimination of the former two-step operation—first making the sandwich on one machine and then transferring it to an overwrapping machine. Both operations are now done by the new machine in a continuous operation.

Such a model of efficiency and low cost, consistent with the highest standards of sanitary handling, was sorely needed by the company. Even though the sandwiches have always been a large-volume item for the company, a succession of manual and then semi-automatic methods of making and packaging them ran production costs high in relation to the modest selling price of 10 cents. In the face of the resulting low margins and low net profits on the one hand, and the rising popularity of the sandwiches on the other, the need has been apparent for improved production techniques to restore a healthier profit picture.

Earlier this year, steps were taken by Le Roy Foods, Inc., Brooklyn, N.Y., a baker of wafers, to assist ice-cream manufacturers with their sandwich-making problems by supplying a pre-packaged wafer sandwich—a unit of two wafers, held apart by a U-board, in an open-end glassine bag, all ready to be filled with ice cream.* Direct hand contact with the product is avoided, but the ice cream must still be ejected into the wafer with a six-way filling nozzle which, operated by one person, can fill 180 sandwiches a minute.

In the 15 years that Swift's Brooklyn plant has been making and packaging sandwiches, various approaches have been used. Slabs of ice cream were at one time cut off giant bricks, placed between two wafers and inserted by bags—all by hand. When bags were used, it was necessary to harden the sandwich before bagging and then place it back again in the hardening room—two operations and more of a jam in the hardening room. A later improvement, but still not the final answer for the utmost in efficiency and sanitation was a method of dispensing the wafers on a moving conveyor and extruding the ice cream on to the wafers. However, the crackers still had to be transferred to the overwrapping machine.

Operation of the faster, more sanitary new machine goes like this:

It starts with two feeding magazines, shaped like a V with the vertex forming under the mouth of the ice-cream extruder. There is, revolving counter-clockwise under the V and extruder, an index wheel with eight slots, each wide enough to hold a completed sandwich. The extruder is synchronized with the speed of the wafer-dispensing device. As crackers from both sides of the V converge, they are filled with a slab of ice cream, extruded at a stiff low temperature so it will not run over and so it will "break off" more readily; the formed sandwich drops into one of slots and the intermittent motion of the wheel breaks off the ice cream. In a few more movements of the wheel, the sandwich is gently eased on to a conveyor which carries it to the overwrapping section of the machine.

The overwrapping technique is not of itself unique, but its operation in conjunction with the sandwich-making

* See "Packaged *Before* It's Filled," MODERN PACKAGING, March, 1953, p. 80.

SUCCESS

Swift's Brooklyn installation is answer to the twin packaging problems of low-cost, mechanized production and approved sanitation

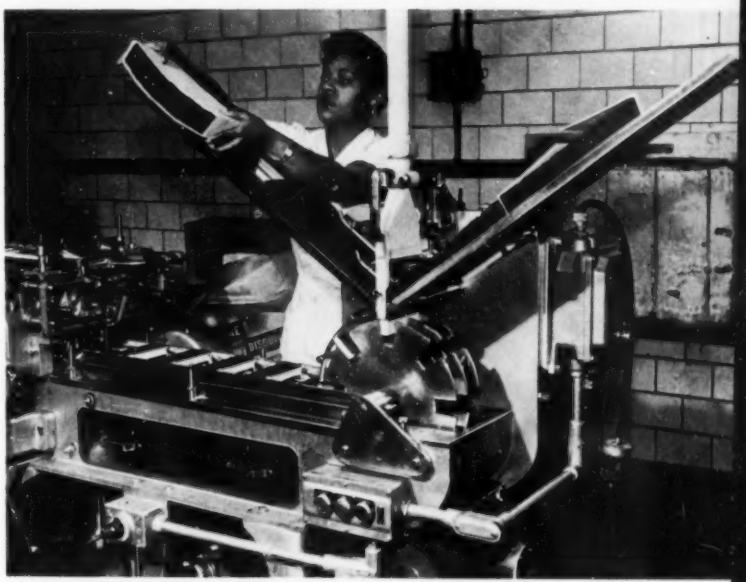
section on the same machine is. To bring the sandwich into position for overwrapping, an elevator lifts it up under a sheet of printed, heat-sealing glassine paper, feeding from a roll behind the machine and cut off by electric-eye registration. Three tucking arms, one on either side and one behind the sandwich, go to work folding the wrapper neatly in place. The back tucker also pushes each of the sandwiches out of the overwrapping area, thereby inching the wrapped packages over a hot sealing plate and on to the packing table.

Quite obviously, this primarily automatic operation requires a limited number of personnel—savings which have amounted to a considerable sum in packaging costs to Swift. At this early point in the machine operation, only one girl is needed to load the magazine with wafers and to watch for faulty packages; one man to attend the ice-cream freezer, supply wafers and supervise the entire operation, and two girls to pack the sandwiches in units of 24 to a carton. These last two girls, who are necessary to handle the machine's large production of 500 doz. sandwiches an hour also code the cartons and chute them into the hardening room where the product is hardened.

Since it is only about 6 ft. long and is mounted on casters, the machine can be pushed out of the packaging area, leaving room for running ice-cream cones or whatever else might be scheduled.

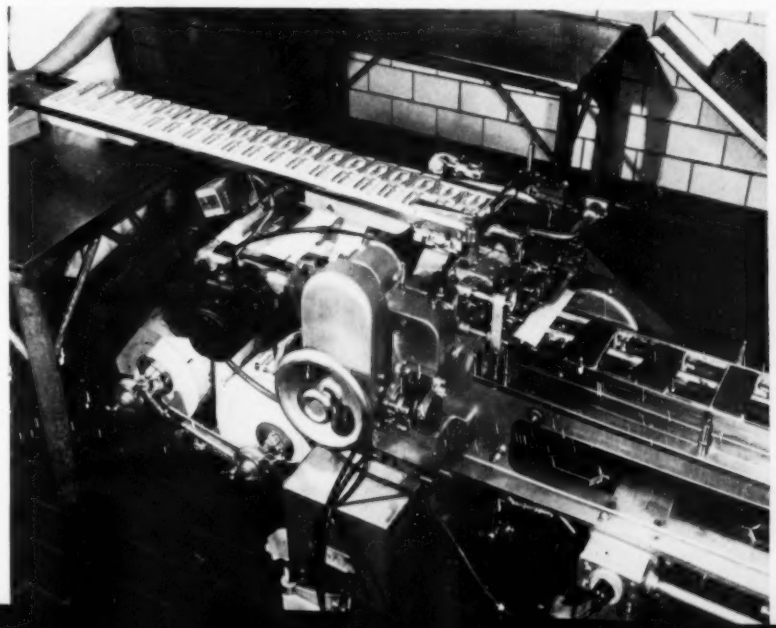
Before the machine turned out a single ice-cream sandwich, officials of the New York City Board of Health were consulted and their recommendations closely followed by Swift and the machinery manufacturer. An infinite number of details of machine design and construction are involved, but a few of the more significant ones include stainless-steel construction for all parts of the machine coming in contact with the product; removable

(This article continued on page 228)



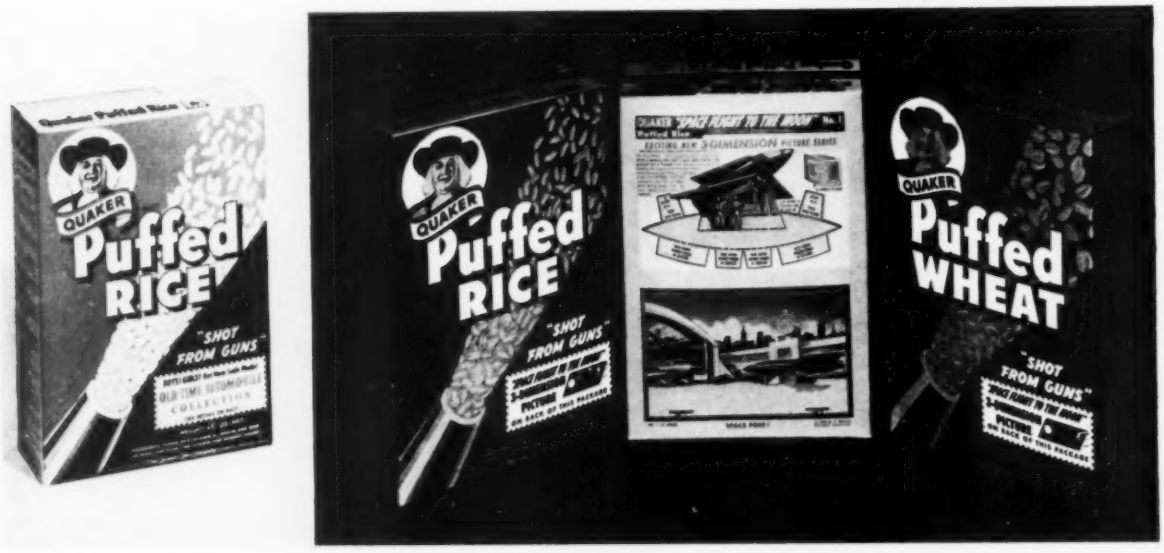
SANDWICH MAKING starts with an ingenious method of loading wafers into the V-shaped hopper in sanitary corrugated sleeves in which they come from baker. Ice-cream extruder (center of V) drops slab of ice cream between two wafers and completed sandwich drops in slot of index wheel, which deposits it on conveyor to wrapping section.

OVERWRAPPING, formerly a separate operation, is second stage on same machine. Elevator lifts sandwich under sheet of printed, heat-sealing glassine, which is cut by photo-cell registration from roll stock. Three tucking arms, one on either side of sandwich and one behind it, fold wrap neatly in place; back arms push sandwich over hot sealing plate.



A new luminescent technique

Quaker's cereal cartons introduce new letterpress inks that are normal in daylight, but glow like neon under black light



OLD PACKAGE, NORMAL LIGHT **NEW PACKAGE UNDER BLACK LIGHT**

Camera, inadequate to record brillance of new yellow luminescent ink under black light, gives rough idea of legibility. Photo at right was exposed 2 min. under ultra-violet lamp. Luminescent yellow also illuminates back panel.

An intriguing new merchandising concept for packaged merchandise—retail store displays of packages printed with luminescent inks which emit a neon-like glow under the influence of "black light" illumination—has been pioneered by The Quaker Oats Co. with the introduction of two cereal cartons utilizing specially developed inks which can be handled at high speeds on regular letterpress printing equipment.

Although the use of luminescent printing on packages, containers and some types of display media is not entirely new[1], there are at least two aspects of Quaker's new program which appear to set it apart from previous work in this field:

1. It marks the first commercial use of luminous inks which can be applied to regular boxboard by letterpress printing just like standard inks.

2. It may result in the setting up of special black-lighted store displays to bring out the full visual impact of this type of printing and therefore may spread to other products.

Does this mean that some time in the future, the shopper entering a retail food store will find the interior darkened, with luminous packages glowing from the shelves under the influence of ultra-violet lights? Probably not. It could mean, however, that as other manufacturers explore the possibilities of this type of printing and as package designers work out new surface-design treatments which take full advantage of the display opportunities involved, black-lighted special store displays will be utilized increasingly as a new merchandising tool.

The new inks do not have the slightly "powdery" feel characteristic of the previously reported luminescent gravure, silk-screen and bronzing inks. Neither do they have the daylight "glow" which was the distinguishing characteristic of the earlier inks. The new inks are designed to glow only under black (ultra-violet) light, which gives them a striking, neon-like brilliance; in daylight, the package printed with these inks does not appear much different from conventional, although it has good, strong colors of somewhat higher intensity than normal.

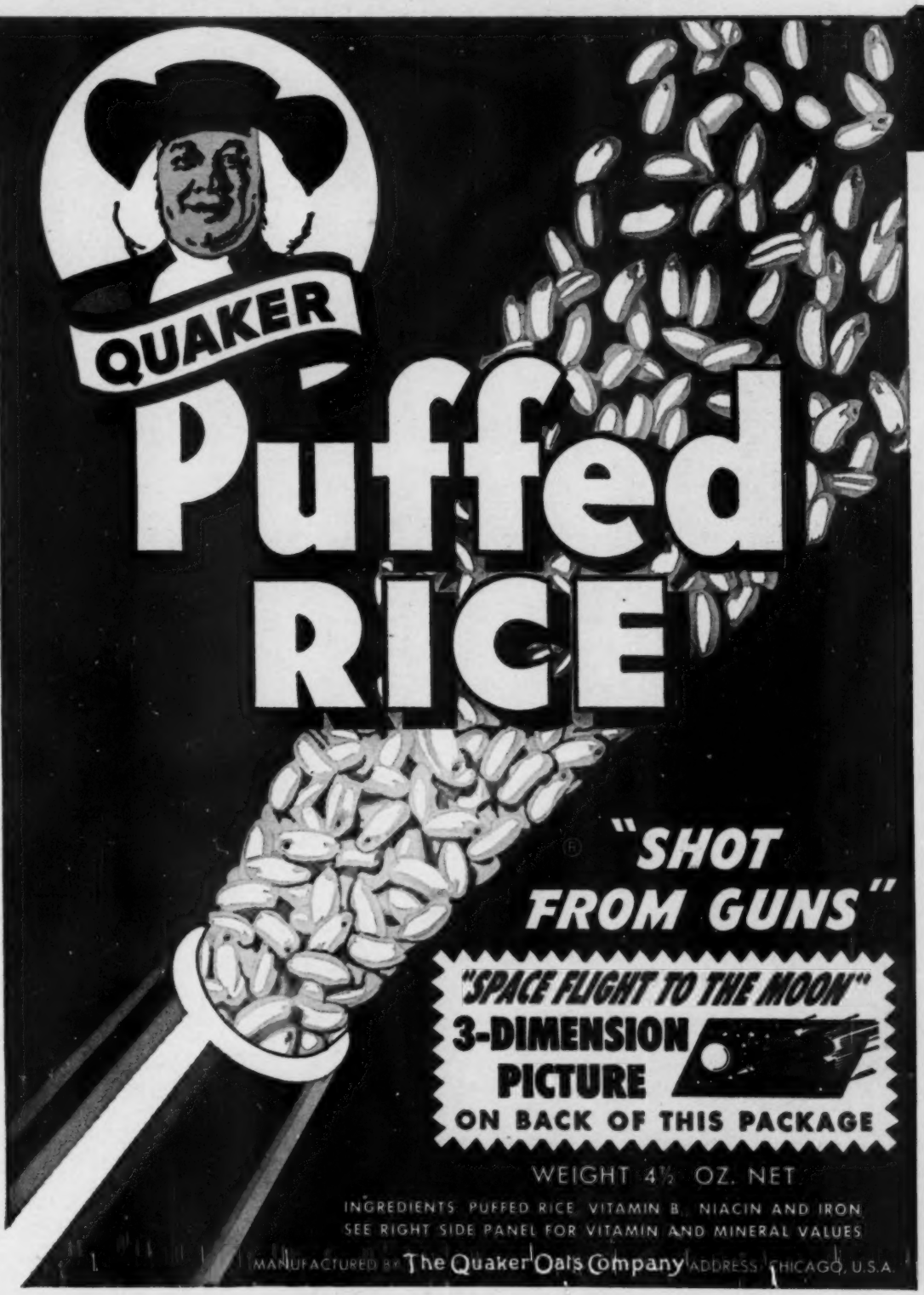
An important point in favor of the

ACTUAL SAMPLE of section of new carton blank shows its satisfactory quality and appearance under ordinary light, although without actual fluorescence; to observe glow, hold it under ultra-violet light. Only yellow is luminescent; other colors are regular inks. Printing is letterpress. SAMPLES, MICHIGAN CARTON CO. AND OHIO BOXBOARD CO.

[1] See "Glow-Color Packages," MODERN PACKAGING, June, 1952, p. 87.

Quaker Puffed Rice

PRICE



KER
d Rice

Collect
G NEW
ENSION
SERIES
to the Moon"
on Packages of
KER
EAT & RICE!

er Space! Begin your Space
ight now! Cut out the exciting
re on back of this package!
different pictures in all on
! Be first to get them all!

e is busy Space Port, with
rious space planes and in-
l check is being made of
just a few moments before
the Moon!

AWAY! With a deafening
takes off . . . climbing up-
ading for the stratosphere.
horizon curving slightly in
ryside and highways below

CE ISLAND! After the take-
rough the stratosphere to-
ch circles around the Earth.
ored and refueled. From the
the Space Island, you see
ts return trip to Earth.

LINER! After refueling on
takes off once more for your
on. Thousands of miles out
s a Space Liner that signals

OUTER SPACE! One of the
travel is the danger of being
tely a small one has struck
Ship's wing, which is repair-
space suits. Note how weld-
pace.

Some time later, after re-
Ship approaches Moon!
sands of miles away, Moon
ball floating in space. A
lit up by the Sun. You can
n.

N! Photomaps are checked
site. Then Rocket Ship in a
down into a smooth valley
is brought to a smooth stop.
has been accomplished.

OON! Armed with Ray guns
danger, you disembark from
Space Suits to explore the
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QUAKER

new inks, as far as package work is concerned, is that they give a smooth, hard, well-anchored coating on boxboard with good coverage—like any good-quality printing ink—and no danger of rub-off. Their performance appears to be good under all normal circumstances and, under black light, exceptional.

Ultra-violet lamps are of course already used in meat display cases and at other points in many stores for their bactericidal value.

Two of the most familiar products in Quaker's big family of cereals—Puffed Wheat and Puffed Rice—were chosen to introduce the new package treatment, marking the culmination of a four-year development program headed by Myron J. Aubineau, vice president in charge of purchasing. Rather than undertake a complete redesign of these two packages, Quaker elected to carry over the former design practically unchanged, working in the luminous-ink treatment at those points where maximum display advantage could be gained. Essentially, the yellow luminous ink which gives the new packages their unique eye appeal appears where white was used on the previous packages.

Specially developed inks are the key to Quaker's significant new packaging treatment. For several years, Mr. Aubineau, working with a Chicago ink manufacturer, sought to find a method of giving Quaker packages effective luminosity without prohibitive cost, using standard methods of printing capable of meeting the production requirements of high-volume food products. The inks had to be capable of drying quickly, resist fading for extended periods, exhibit good coverage on a single pass through the press and be free of toxicity.

It is felt that these goals have been successfully achieved in the new Quaker packages. The quality may be seen and felt in the attached sample of one of the Quaker carton blanks. The effectiveness of the colors in normal daylight may be observed and, if the reader is fortunate enough to have an ultra-violet lamp at hand, he can observe the really striking black-light effect.

Although the ink employed is somewhat more costly than standard types of printing inks, cost is not considered a serious handicap in view of the fact that the luminous printing is confined to limited areas of the glue-sealed folding cartons.

Previous work with packages making use of daylight fluorescent colors has been confined largely to labels overprinted on papers having a fluorescent background, to silk-screen applications on fibre shipping containers and to similar applications somewhat limited from the production standpoint. Previous work in this field has been done by means of gravure, flexographic or silk-screen printing, or by a special bronzing method.

In making possible, for the first time, regular letterpress printing, the new inks appear to have really opened up the field of luminescent printing of packages. The previous methods had limitations of one sort or another which made big packagers hesitate to commit themselves to anything as new and novel as luminescent inks. With letterpress, however, it becomes practical; quality standards of printing can be retained and no great investment is involved if the method should later be abandoned.

Also available from the same ink supplier are offset inks having equivalent properties.

Three colors—red, blue and yellow—are used on the new Quaker Puffed Wheat and Puffed Rice cartons, with the luminescent ink confined to those portions of the design which appear in yellow. On Puffed Wheat, the yellow is used for the circular panel behind the face of the Quaker in the trademark, on the face itself and on the curved ribbon beneath the Quaker portrait. The yellow appears again on the product name—largest printing on the entire carton—and on the famous slogan "Shot From Guns," as well as on a rectangular panel near the right lower corner of the display face of the package, where it effectively sets off printing in blue and red. Touches of yellow also appear in the grains of wheat shown emerging from the muzzle of a gun. The yellow luminous ink is also spotted in at several points on the back panel of the package, which is currently devoted to a series of cut-outs depicting a "space flight to the moon."

The new Quaker cartons also mark the introduction of a new package convenience feature which facilitates dispensing of contents. This is in the form of a scored line (not shown on the attached sample) extending across the front panel, about ⅝ in. down from

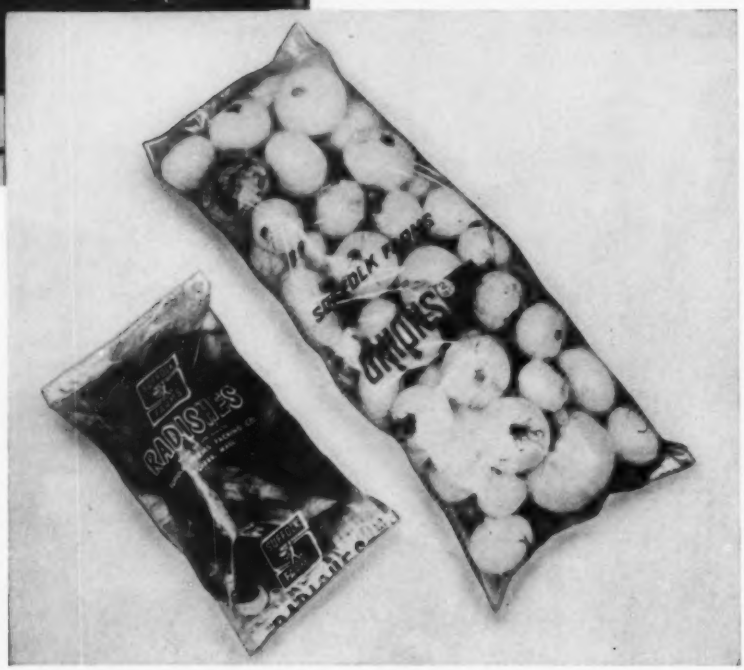
(This article continued on page 207)

BACK-LIGHT DISPLAY can be very simple; note the fixture with two ultra-violet tubes resting atop this mass display of Quaker cereals. Enough fluorescence can be obtained in this way, even with regular store lights illuminating the display, to make the packages eye-compelling.



Polyethylene-package





A PACKAGING FIRST is the handling of onions and other produce items on a fully automatic machine like this. New model is specially built to handle polyethylene film, to print the film and to bulk-and-dribble fill non-free-flowing products in weights as high as 5 lbs. Suffolk Farms' packages range from 4 oz. to 2 lbs.

In a pioneering move, Suffolk Farms Packing Co., Revere, Mass.—one of the real pioneers in the branded prepackaging of produce[1]—is finding an answer to some of the toughest problems in the high-speed machine handling of printed polyethylene film and at the same time is pointing the way toward truly automatic bagging of some difficult produce items.

Operating the newest model of a standard film forming, filling and sealing machine with dual heads, specially equipped for the handling of polyethylene, Suffolk Farms is turning out packages ranging from 2 lbs. of onions down to 6 oz. of radishes. The machine is reputed to be capable of speeds of 36 to 40 packages per minute. Operation is completely automatic and no difficulty has been found in effecting firm seals while keeping the printed polyethylene in register.

This type of machine has long been a work-horse in the filling of dry and powdered products in pillow-type packages. Recently a machine of the same basic new model was adopted by one of the leading California dried-fruit packagers, demonstrating the possibilities, through an ingenious feeder-weigher mechanism, of handling non-free-flowing products.[2] But in its weight capacity (up to 5 lbs. per package) and its special provisions for the handling of tricky polyethylene film, the Suffolk Farms installation establishes new boundaries for this type of machine.

Other trail-blazing features of the machine include a device for printing and perforating the film as it enters the machine, enabling the purchase of economical plain polyethylene, and an ingenious bulk-and-dribble feed mechanism with special provision for the type of products handled by Suffolk Farms.

Suffolk Farms estimates that its installation will cut the cost of packaging materials by 40% and labor by 75%. To Suffolk Farms, as a terminal warehouse packer, such savings are vital if it is to compete cost-wise with store-level packaging of products like onions and radishes. It was therefore natural for the company to investigate any new machine developments

[1] See "A Touch of Seasoning," MODERN PACKAGING, Feb., 1953, p. 86.

[2] See "Mechanization Milestone," MODERN PACKAGING, March, 1953, p. 73.

maker

New version of a standard machine can print, form, fill and seal 2-lb. pillow-packs of onions at speeds of 36 a minute

holding the promise of savings in packaging costs.

For the first time the new machine has enabled the company automatically to package 2 lbs. of onions in a printed polyethylene bag 7¾ by 12 in. and this size can be increased for other products up to 9¾ by 14½ in. The smaller radish package, containing only 6 oz. and measuring only 4¾ by 7½ in., is perhaps not typical of the various products that can be run; in this case the polyethylene film is preferred for its durability and, at the same time, maximum use is being made of the equipment, though a 3-in.-wide bag is the smallest generally run.

As all packagers who have handled polyethylene know, its limpness makes it difficult to handle on high-speed machines and, while being sealed under tension, it stretches, usually playing havoc with the electric-eye registration of printed film.

In its sealing and electric-eye mechanism, the new machine takes care of this problem. An important change was made in the basic machine at the point where the film passes from the roll stock to the forming-and-filling tube. The customary method of electric-eye registration—backtracking the film whenever it is out of register with the printed design—is not practical with polyethylene, since the film would stretch when pulled back and not completely correct the error. A new approach to this problem allows a drawbar to release the film at a pre-determined point for correct register as it makes its downward draw stroke.

To produce a perfect seal of the material, a way was needed to relieve tension over the entire sealing area, to bring the sealing wire into contact with the film for a closely controlled spurt of current and then to cool the seal down to normal temperature before exerting tension on the area again.

In the machine, as the film is drawn over the forming tube, the horizontal seal is made by the drawbar when the package—previously filled—is sealed at the top and the bottom seal is made for the next package to be filled. All these motions are made rapidly, effecting a firm seal yet allowing unhampered production.

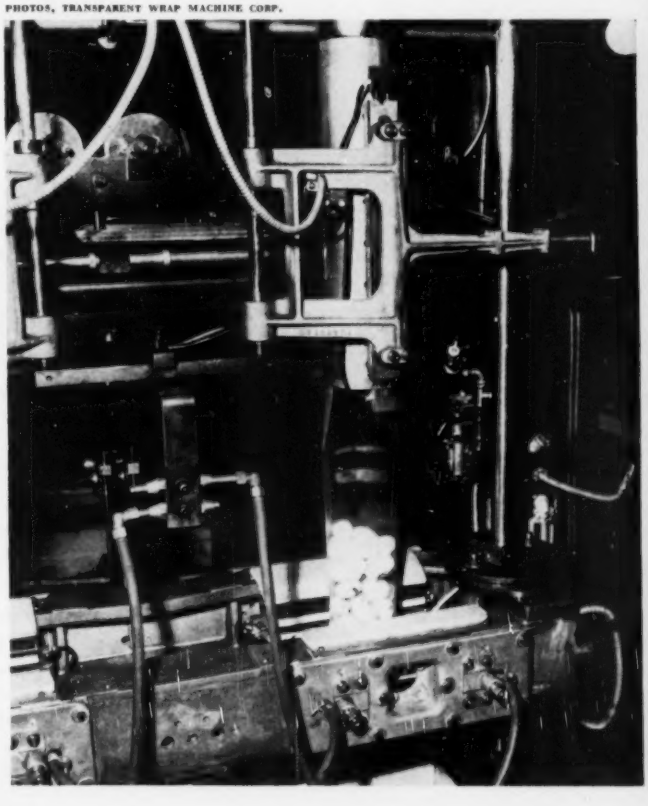
Allowances have been made for tension on the film during the downstroke of the drawbar. This is done when the filling operation is completed and the drawbars closed by two grippers—one above and one below the sealing area—which take the tension off the film over its entire width. These wide grippers relieve the pull from above as the next package is drawn into filling position and the weight of the filled package is about to be sealed and cut away.

Thin, hot wires, vital components of the impulse sealer used for the top and bottom seals, are pressed against the film and a short burst of current, carefully controlled to produce sufficient temperature for a firm seal, is introduced. As part of the sealing cycle, water is circulated through the hollow portion of the drawbar which surrounds the sealing unit itself. This cooling action, which solidifies the melted polyethylene, is sufficiently fast to allow a high production rate.

The grippers—taking the tension during this operation—are connected with a piston which operates from the electric eye. When the printed pattern is registered, the piston releases the grippers, although the drawbar may continue for a short time on the downstroke before it returns to the top of its stroke for the next packages.

Hydraulic operation is applied to a major part of the machine operation

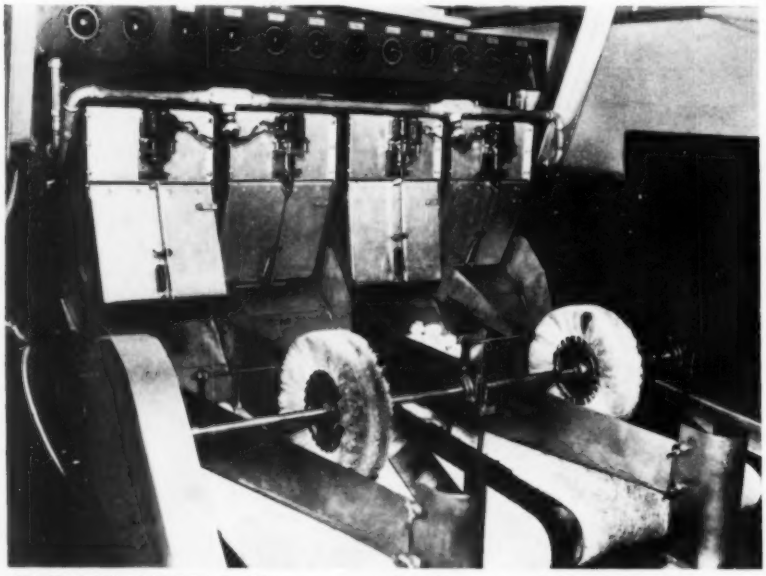
PHOTOS, TRANSPARENT WRAP MACHINE CORP.



FILM FEED licks problems of cling and stretch in polyethylene. At the point where top and bottom seals are made, below the filling station, special grippers (not visible) hold film to take off tension caused by weight of product. At upper left, behind, may be seen two ribbon reels which serve the printing mechanism.



ON FLOOR ABOVE the machine, this custom-built feeding bin is set flush with the floor. Four hoppers in the foreground for large-sized onions supply the bulk fill, up to about 90%; dribble fill to exact weight uses smaller-sized onions in the four smaller hoppers in the rear.



ON FLOOR BELOW, looking up toward ceiling, may be seen the discharge gates from filling hoppers, with two channels on the short conveyor leading into dual heads of the machine. Note rotating soft brushes which help to align the onions and also to avoid pile-up.

with correspondingly positive operation and control. The end-seal mechanism and the photo-electric regulator are operated with hydraulics.

A special product-feeding hopper is used, a unit custom made from stainless steel for the type of product being packaged. It is set in the floor directly above the machine so the product can feed down mostly by gravity. Suffolk Farms is contending mostly with onions, a vegetable which varies so widely in size as to complicate accurate net-weight packaging. However, weighing is based on the reliable system of bulk and dribble feed—the larger onions in four different bulk compartments and the smaller ones in an equal number of dribble compartments, with at least 90% of the fill from the former one.

The bulk of the product drops from the hopper into four weigh buckets until nearly exact net weight is reached. At that point the bulk feed is stopped and dribble feeding only continues until the nearest point of exact weight is reached. Buckets 1 and 2 dump into a funnel which feeds one head of the machine. Buckets 3 and 4 dump into the second head. In operation, Nos. 1 and 3 are synchronized to dump simultaneously, while 2 and 4 are in the process of coming up to weight; then 2 and 4 dump while 1 and 3 are loading. This system is, of course, responsible for the continuous, fast action of the machine. The machine is geared to function only when the scale discharges and cannot complete its bag-making stroke or close the bag until it is properly filled.

However, before both speed and satisfactory fill could be achieved, a means was needed of carrying the product from the weighing buckets to the forming-and-filling tubes. This problem was cleverly solved with a 2-ft. conveyor belt for each of the two weighing buckets.

Another problem, though, was that the onions dropping from the hopper to the conveyor would fall every which way into the feeding tube, taking up more cubic area than necessary in the bag. By adding a revolving brush, at a point just before they enter the feeding tube, the onions are now mowed flat and fall properly into place in the bag.

Radishes, with their tops completely removed, are handled much like the onions, except that the quantity filled is considerably smaller.

Although plain polyethylene film of 2-mil gauge is used, the film has been specially treated during manufacture to insure a good printing impression and firm ink adhesion.

The device incorporated in the Suffolk Farms machine, between the film roll take-off and the forming tube, uses an ingenious hot-die stamping method to print the Suffolk Farms trademark, name and product name in two colors on each length of film. A third color could be used if desired. On the onion bags, a price spot and the 2-lb. weight of contents also are printed as part of the label and 16 quarter-inch holes are perforated in the bag, to give the desired amount of controlled ventilation to the finished package.

Pre-printed film can, of course, be used on this machine if desired and the printing device omitted.

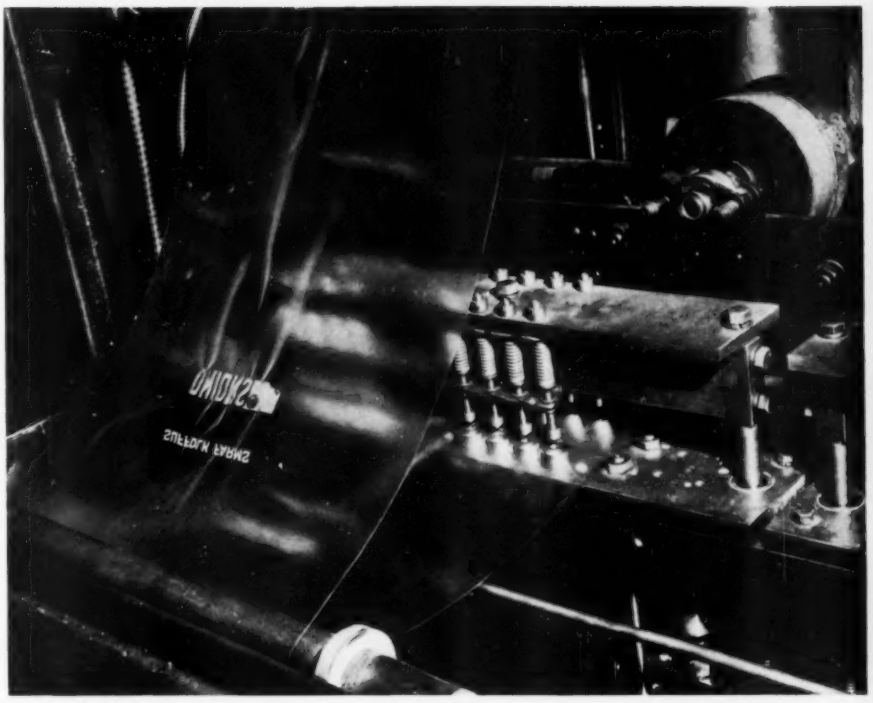
Printing is synchronized with the stroke of the drawbar; an impression is automatically registered every 12 in., 8 in., or whatever the length of the bag may be. A tape, acting much like a typewriter ribbon, is used for each color required, along with a die for each printed message. Printed in blue on the onion bags are the words, "Suffolk Farms," and below it, in large red type, "Onions 2 lbs." and the price spot. Though this company has not as yet tried it, a third color could be registered by splitting one of the ribbons just like the red-and-black ribbons often used on typewriters.

Ordering unprinted roll stock has, of course, simplified Suffolk Farms' inventory problems. It is no longer necessary to keep separate printed stocks for each of the many products being packaged. Change-over from one product to the other requires no more than 15 min. to adjust the machine and to change the printing dies and tapes.

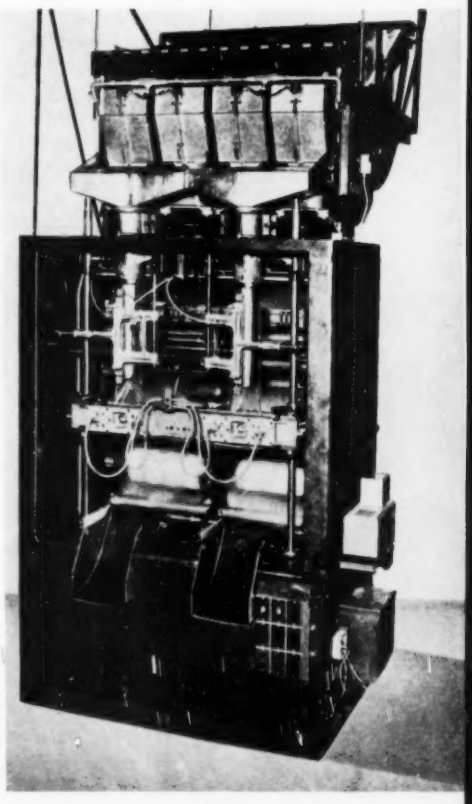
Having a printed package is essential to Suffolk Farms' policy of establishing its brand name in a distribution area encompassing the New England states and in building acceptance for the weighed, sealed package of produce. A company representative recalls the early days of packaging carrots without tops when consumers considered the beheaded product as something short of fresh. The same problem is involved with radishes, he says, and they may, like carrots, take as long as three years to gain full consumer acceptance.

Onions and radishes are the only two products being packaged on this new machine at Suffolk Farms at present, but the prospects are that other products such as 1½-lb. units of beets and 3½-lb. units of washed potatoes will be added in the near future. Running additional items will require only minor adjustments and of great convenience is the fact that two different products—onions and beets, for example—can be run simultaneously because of the two main feeding heads. In such dual operation, widths of the bags can differ, with different-sized forming and filling tubes, but lengths must be the same because of the synchronized strokes of the sealing drawbars.

New machines of this type promise to clear away problems for many types of products demanding the strength and protective qualities of polyethylene film, but which formerly were limited as to the size of package that could be formed on automatic equipment. Similar machines are already operating at Swiss Farms, Philmont, N. Y., packaging potting soil and humus in weights up to 3½ lbs., and at Concord Confectionery Corp., Brooklyn, N. Y., for 1- and 2-lb. weights of candy.



PRINTING DEVICE on back of the machine is believed to be first ever incorporated in a polyethylene package-making machine. Hot-die stamping in two colors is done automatically from ribbons moving across the web (in background), while perforations are punched in foreground. Web then moves up to the top of the forming and filling head.



A PRE-INSTALLATION photo shows relation of various components of this new-model machine. Either one or both heads may be operated. Top speed is 40 to 45 packages a minute.

CREDITS: *Model C "Transwrap" forming, filling and sealing machine and special equipment, Transparent Wrap Machine Corp., Route 17 & Henry Sts., Hasbrouck Heights, N. J. "Visqueen C" unprinted polyethylene film, The Visking Corp., 6733 W. 65 St., Chicago 38. Printing dies and tapes, Peerless Roll Leaf Co., Inc., 4511 New York Ave., Union City, N. J. Pre-printed radish-package film, Linvure Co., Inc., 74 India St., Boston 10, Mass.*

PACKAGING



1



2



3



4



5



6

7



8





9

PAGEANT

1 Carr-Consolidated Biscuit Co.'s package for its new "Happy Time Assortment" cookies for entertainment serving is designed with an air of gaiety. Firecracker party-favor drawing connotes party-time use of the cookies. Fine-detail, life-sized, full-color reproductions of the actual cookies dominate the package. Design, Jim Nash, New York. Wrapper, Kalamazoo Vegetable Parchment Co., Parchment, Mich.

2 A paper canister is the newest package for nail enamel, introduced by Revlon for its new "Cherries in the Snow" shade. A four-color glamour illustration features the wrap-around label, which is predominantly red and blue. Canister, Harcord Mfg. Co., Jersey City, N. J.

3 The Hallowe'en custom of "trick or treat" was adapted to a clever impulse candy promotion by L. S. Heath & Sons. Its regular 24-count Heath candy-bar carton was converted into a package with strong seasonal appeal by simply applying an outer sleeve. Printed in the same colors as the regular carton, the package looks like a single unit. Carton and sleeve, Milprint, Inc., Milwaukee.

4 Front and side acetate-covered windows of these three-color cartons for pre-cut, ready-to-sew girls' dresses marketed by Addison Lewis Co. for International Textile are said to be rapidly increasing their sales. This promotion indicates the growing acceptance of packaging to merchandise "ready-to-make" items in department stores. Cartons, United Board & Carton Corp., New York.

5 Atlantic Steel Co.'s fibreboard carton for its full line of nails, rivets and staples is further indication of the passing of the nail keg. In addition to its colorful merchandising appeal, the automatically sealed carton saves 25% storage space, stacks neatly, aids identification and inventorying, and is easy to handle. Perforated top, easy to remove or replace, enables its use as a tote box. "Nail Caddy" carton, International Paper Co., New York. "Pack-omatic" sealer, J. L. Ferguson Co., Joliet, Ill.

6 R. T. French Co.'s Worcestershire Sauce now comes in a new-type dispenser bottle with a no-drip shaker top. Plastic dispenser fitment slips on top of bottle and is covered by a plastic closure. Successfully market tested in Southern California, it is now used on 5- and 10-oz. bottles. Bottle, fitment, closure, Owens-Illinois Glass Co., Toledo. Label, Rochester Lithographing Co., Rochester, N. Y.

7 A new packaging trend is the multiple wrap for toilet tissue in a four-roll unit, now used by Scott, Diamond Match, Doeskin and Stevens & Thompson. Standard paper wraps, printed on oil-ink presses and applied by automatic machinery, are used. Elimination of individual wraps for rolls results in savings. Wraps, Nashua Corp., Nashua, N. H. Packaging machinery, Hayssen Mfg. Co., Sheyboygan, Wis.

8 Equally good display both front and rear is achieved for Wooster Rubber Co.'s Rubbermaid Safti-Cup Bathtub mat in this new restyled package featuring a larger window and an in-use illustration of the mat. Plans are to restyle packages of all major products in the company's houseware line. Package, United Board & Carton Corp., New York.

9 Interesting possibilities for irregular-shaped constructions in two-piece folding boxes are illustrated by this colorful bird-cage gift box in Cannon Mills 1953 towel-set collection. Same box serves as Cannon's Carousel package with printing changed to design of prancing merry-go-round steeds. Box, Burgess & Way Corp., Philadelphia.

10 Printing of the design right-side up and upside down on the sides of the cover of packages for La Belle Industries two camera-accessory items assures product identity when the box is closed or when it is opened and placed inside the cover. Design, Richard M. Franz, Milwaukee. Boxes, C. D. Baird Co., Milwaukee.

11 A saddle-label, cellophane pocket package for five individually wrapped Garcia Grande cigars, introduced by S. Frieder & Sons Co. for supermarket sale, offers visibility, protection and ease of opening. When opened, it remains a full pouch which can be placed in the consumer's pocket. Cellophane is 300MST54, labels are of heat-sealing paper and revenue stamps are treated with heat-sealing adhesive. Labels, E. B. Yordy Co., Wilkes-Barre, Pa. Cellophane, E. I. Du Pont de Nemours & Co., Inc., Wilmington, Del.

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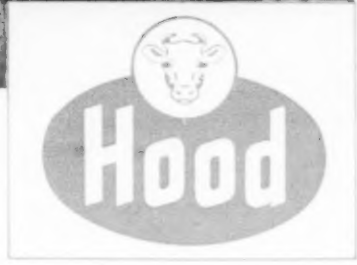
11



THE RESEARCH APPROACH



IMMEDIATE IDENTITY is established by the new simplified Hood trademark and a distinguishing color treatment for each different type of milk: blue for pasteurized; red-orange for homogenized; red and bright pink for strawberry; brown for the chocolate flavored, and light and dark brown for coffee.



An interesting approach to the use of modern business research techniques for the development of package design is found in the redesign program that the dairy-products firm of H. P. Hood & Sons, Boston, has just completed with characteristic New England thoroughness.

With an analysis of its problem as scholarly as a Harvard Business School project, Hood has studied requirements necessary to sharpen the appearance of its packages to meet the changing merchandising patterns that are currently being encountered by all of the large regional dairy-product companies today.

The results of this careful planning are seen in the colorful new packages now being distributed in all the company's markets.

Instead of an anomaly of trade symbols that came into use through the years, all packages in the Hood family are now quickly recognizable through one strong single trademark—a distinguishing Hood oval with a circle cutting into the top center of the oval enclosing a cow's head. Distinguishing color treatment and design motif have been established for each product group in the Hood family and for each type of product. And the entire program has been coordinated to tie in with all of the company's advertising and promotional

OLD PACKAGES show need for redesign to bring all packages into uniformity for quick recognition in self-service outlets.



TO DESIGN MODERNIZATION

One of New England's oldest dairy firms develops new techniques for selecting a trademark and a unified format

copy, its letterheads and bill heads, as well as company vehicles.

The need for more colorful, uniform package design became apparent with the increasing trend to food-store purchasing of dairy products selling from open refrigerated cases. Reports in the dairy industry show that store sales today are rapidly becoming more and more a factor in the distribution of dairy products.

Projected plans for Hood's new foods division, which probably will be selling an increasing number of dairy items, also indicated that a strong family line of packages would be a definite asset in capitalizing on Hood's long reputation for quality dairy products.

The name Hood has been associated with dairy products in New England since 1846. Yet, only two years ago Hood had no standard trademark for use on packages or in its advertising.

Uniting the packages of several sales divisions of a company under a single distinguishing trademark posed a difficult and time-consuming problem.

A cow-head trademark—probably the oldest symbol used by the company—was being used principally by the milk, country and egg divisions; a hexagonal logotype known as the "Hood slug" was being used by the ice-cream division. Beyond that there was a certain amount of cross-over in use by the various divisions of both trademarks. This was an effort to achieve continuity, but it only resulted in more confusion.

The first step toward redesign, therefore, was the decision to establish a single trademark. It seemed logical that one trademark used by all divisions and in all advertising and promotion would have an added advantage to all divisions and to the company as a whole through the impact it would have on customers.

Early in the study, Hood analyzed the requirements of a good over-all company trademark. The recommen-



PHOTOS, ROBERT C. NEUBAUER.

ICE CREAM is packed three ways: popular pints in printed over-wrapped corrugated insulator packs, half-gallon refrigerator-storage packages and pails for dipped ice cream. Confetti motif gives festive appearance and increases package identity. Scallop that follows shape of o's in Hood trademark gives further distinctiveness. Vertical color bars differentiate the ice-cream flavors.



TOP-QUALITY Jersey Belle butter is distinguished from regular Hood Fine Creamery by deep green and gold package, while other type has red and blue-green package. Trademark establishes immediate identity.

dations specified that it should do the following:

1. Be a common mark
   (a) for the entire company,
   (b) for all divisions of the company,
   (c) for all products of the company.
2. Have practical application to:
   (a) packages—all sizes, shapes and types, including milk caps and bottles,
   (b) all advertising media,
   (c) all company vehicles, literature, letterheads, bill heads, checks, etc.
3. Be distinctively Hood.
4. Have fast identification, be easy to read.
5. Have favorable reaction (at least not objectionable).
6. Have a good memory factor.
7. Have an association with the business and product.
8. Lend itself to use of color.
9. Lend itself to reverse usage.
10. Reflect the character of the company.

A study of successful trademarks was undertaken. This research indicated that the majority of good ones depended on two factors: (1) simple, strong letter treatment of the name; (2) enclosure in an uncomplicated shape.

And as the selection of the trademark was considered such a very basic element in the company's business existence, management deemed it unwise to make the selection without considering proposals by various outside designers.

Accordingly, four designers were given the assignment of developing a trademark along agreed lines: strong type face for the word "Hood," in an oval shape, in a dimension ratio of five to three—five in the parallel plane and three in the vertical, with a circle cutting into the top center of the oval enclosing a simplified cow head. Complete freedom, however, was given to submit other recommendations. The company considers it significant that not one of the four submitted designs of their own choice which varied basically from Hood's original specifications.

The final trademark incorporates the findings of the Hood Sales Research department after testing all submissions for three things: (1) legibility, (2) memory factor, (3) association.

Test methods used were an adaptation of psychometric, visual-demonstration principles. To test legibility, photos were taken of the various submissions to the company. These were mounted on a slide projector and deliberately turned out of focus. A calibration was taken at the point at which each went out of focus. For the memory factor, cards were flashed, one at a time, for a period of four to 10 seconds in front of individuals who then described what they had seen. Comments of the various people (who were both members and nonmembers of the company) were used to evaluate association.

As a further assurance of the findings of the Hood research department, an additional check of the design factors was made by an independent research laboratory located outside the New England area.

After acceptance of the final trademark, a complete redesign of all packages was obviously the next step. To speed up the project and to coordinate all executive thinking in the development of strong family feeling in all the packages, the company organized a package-design committee. This committee consists of the advertising manager, as chairman, with package design as his specific responsibility; the assistant to the advertising manager; the ice-cream sales promotion manager; the milk sales promotion manager; a purchasing department representative; advertising agency representative; the independent packaging consultant and, when advisable, representatives of the production, laboratory, sales research and other interested departments.

The selection of a package designer for the over-all program was the next essential question. The experience of working with four designers in the development of the trademark was extremely helpful, the company says, as it provided an opportunity to prepare a check-list of the qualifications Hood was looking for in the selection of a designer. The list which follows may

(This article continued on page 230)

MODIFIED design is adaptable to specialty items in different-shaped containers such as these for cottage cheese, soured cream, cream cheese.





NO FIXTURE is needed to display these acetate-window cartons for socks on supermarket shelf. They may be removed from shipping carton and simply stacked in any location like food packages. Back of package contains guarantee and fill-in space for purchaser's name and address.

Super-selling socks

Soft-goods marketer turns to window carton for successful self-service operation

Further indication of a significant trend to packages for non-food items that can be sold right off the shelf in supermarkets without need of a special display fixture is the new packaging just adopted by Superbilt Products, Inc., for socks. It follows the same line of thinking as evidenced in the recent successful introduction of a supermarket carton unit for Pal Blades.*

Superbilt, an outstanding leader in the supermarket soft-goods field, which now sells socks in more than 4,000 supermarket outlets, has developed window-carton packaging for all its socks—men's, women's, girls' and boys'—after more than nine months of extensive research to determine the kind of package most suitable for this type of selling.

The company realized that if socks were to continue as a non-food staple in the supermarket, the package form must be developed to meet dealer requirements with complete satisfaction. No previous package, according to Superbilt, had done this.

The first requisite, of course, was a pilferproof package—one that could not readily be secreted in pockets and handbags. Beyond that, however, it was reasoned that the successful package of the future would be of rigid construction so that it could be stacked right on standard store shelves like food packages. Such cartons require only removal from a shipping case to be stacked in any desired location. They do not require extra attention for placing in a special fixture, although they offer equally good display if a fixture is desired—thus having a dual advantage.

The element of product visibility is retained by the use of a transparent acetate window which gives a complete view of contents so colors and styles may be seen at a glance.

Another innovation for the two-color-printed window carton is the use of standardized color combinations that simplify inventory control and make it easier for the shopper to select the proper merchandise—yellow and blue for all men's socks, red and gray for all girls' and women's socks, red and blue for all boys' socks.

All boxes contain assortments of four pairs of socks, except those for men's dress socks, which are sold in three-pair units. Each box is prepriced, if desired, at 99 cents, the most popular selling price, with price designated in two places—on the front panel and on one end panel. There are also two places for size designation and size is additionally printed on the socks so that it will be visible through the acetate window. The front panel gives a complete description of the type of socks inside the package and the back panel carries an unconditional manufacturer's guarantee with a blank for fill-in with purchaser's name and address in case the socks need be returned. The back panel also carries a guide to correct size in relation to shoe size.

The new cartons, measuring 11 by 4 by 1⅛ in., are of sturdy tuck-in lock construction. They are difficult to open without tearing the flaps, which discourages tampering.

The new packaging program was introduced through a 10-week direct-mail campaign covering all Superbilt customers and prospects, totaling some 10,000 markets. The company reports such success and acceptance for the new packaging that it has scrapped its entire inventory of old packaging materials.

* See "Fixtureless Blade Packs," MODERN PACKAGING, May, 1953, p. 88.



Flasher for watch bands

Jacoby-Bender's simulated television-set display, with its dramatic TV screen, creates an effective point-of-sale unit tying in directly with the company's TV advertising program promoting J-B watch bands. An automatic flasher transforms the blank mirror-like screen into a striking setting for the merchandise and for sell copy.

The 10-in. screen is made of translucent metalized acetate. Silk screened in red on the outside of the screen is the legend "Beautify Your Watch," together with a white outline of the company's triangular trademark. On the inside face of the screen are the initials "JB" and the words "Watch Bands," together with a reproduction of the company's Fashion Academy Award for style and beauty, all of which are revealed, together with three actual watch bands, when the unit is lighted. Silk screened at the top of the plywood cabinet is the statement, "As Advertised On Television."

CREDITS: *Display, P.O.P. Displays, Inc., Long Island City, N. Y., using "Mirro-Brite" metallized acetate supplied by Coating Products, New York.*

DISPLAY



Sound added to motion

Motion and sound are combined in this paperboard display card for the new Weather-Pruf Diamond Crystal salt, designed to promote sales of the product in grocery stores and supermarkets.

The display piece shows a perturbed wife watching her angry husband at the breakfast table holding a salt shaker in his hand. His arm goes up and down, indicating his shaking of a clogged salt shaker in vain. The moving arm provides a tapping noise that attracts customers. The moving arm is made from a separate piece of paperboard.

Dominating the breakfast table, on which is reproduced a tablecloth and a plate of bacon and eggs, is an enlarged reproduction of a package of Diamond Crystal salt.

The display, which measures 18 in. wide and 21 in. high, is topped by a die-cut piece with copy that reads, "Don't Hit the Roof! Use Weather-Pruf Salt." The unit is silk-screen printed in seven colors.

CREDIT: *Display, Kling Studios, Inc., Chicago.*

Revolving birthday candles

Birthday candles are brought right up on the counter with this new self-service display rack introduced by the Will & Baumer Candle Co. Trade and consumer research have established that a display of birthday-cake candles prompts additional purchases of other items used at birthday parties. This is said to be especially true in food markets, bake shops and stores selling "party goods," where the candles start a string of related impulse purchases. The circular display, sturdily constructed of welded wire, is 1 cu. ft. in area and rests solidly on any flat surface. It revolves for easy identification and selection of color. Six cartons holding 12 individual boxes each fit in the unit. The individual boxes, containing 36 candles, have been redesigned for effective point-of-sale display and match the coloring of the display boxes. The display boxes, which open at perforations at the bottom for self-service selection, may be used as separate display units where use of the wire rack is impractical. The centerpiece that tops the display unit is similar in design to the boxes and carries a circular patch prominently displaying the 15-cent price of the product.



GALLERY

New Flo-Ball window and counter display packet

A huge four-color-lithographed, dimensional display bearing a giant replica of the New Flo-Ball retractable pen on a separate plane is the principal unit in a window and counter display packet that is part of a national advertising campaign aimed at putting the popular-priced New Flo-Ball pen in the pocket of every user in America. The center piece, measuring 40 by 40 in., can be used by itself, or may be arranged with similarly designed smaller side pieces.

The center piece of the display illustrated is a patented self shipper made of heavy corrugated wings; top and a hidden turn-back on the bottom fold inward to complete the package. All smaller pieces are packed in the unit. When folded for shipment, the entire kit measures only 30 by 19 by ¾ in., well within the new parcel-post shipping regulations. Other pieces in the packet include 12-by-23-in. four-color paper posters and metal counter merchandisers.

CREDIT: *Display, Einson-Freeman Co., Inc., Long Island City, N. Y.*



Designers Council awards

PDC selects best packages in eight categories and a 'best in show' for the revived Irwin D. Wolf Award

Thirty entries were singled out for special recognition among more than a thousand entered in the first annual competition for National Package Design Awards sponsored by the Package Designers Council.

The citations were made at an awards luncheon Oct. 21 at the Park Lane Hotel, New York, where selected entries were exhibited in the Versailles Room Oct. 21 and 22. A selected group of the packages including the award winners are to be published later in a book entitled "PDC Annual of American Package Design."

The jury of judges made its selections Oct. 7. The awards are intended to call public attention to the contribution of creative design to a package's effectiveness and to the increasing role of packaging as one of the prime movers of sales. Most important factor taken into consideration, therefore, by the judges was the degree to which a packaging project appeared to reflect today's new trends in merchandising, with special emphasis on self service and self selection aspects.

PDC was most gratified with the wide participation in the activity, indicated by the number of entries and winners outside the Council itself among non-member designers, advertising agencies, manufacturers, container manufacturers, suppliers and retail outlets.

The jury of awards was comprised of Irwin D. Wolf, vice president, Kaufmann's department store, Pittsburgh, chairman; James C. Boudreau, Dean of Art School, Pratt Institute; Leo Burnett, president, Leo Burnett Co.; John E. Jamison, president, Art Directors Club of New York; J. Sidney Johnson, director of trade relations, National Biscuit Co.; Dorothy Liebes, designer; Saul Poliak, Clapp & Poliak, management, AMA Packaging Exposition; Dorothy Shaver, president, Lord & Taylor.

In the absence of three judges, Mr. Poliak acted as chairman for Mr. Wolf; J. Strother Cary, administrative vice president of Leo Burnett, acted as alternate for Mr. Burnett who was in Europe, and Harry Rodman, art director for Lord & Taylor, served for Miss Shaver.



Winner of Irwin D. Wolf Award is The Mennen Co. for men's toiletries packages designed by Francis E. Blod, Design Associates, New York.

The winners and honorable mentions in their respective categories as announced by PDC are as follows:

For outstanding merit in package design: *Irwin D. Wolf Award:* Mennen's Men's Toiletries, designed by Francis E. Blod, Design Associates, New York, for The Mennen Co. Suppliers: Cartons—International Folding Paper Box Co., Inc., North Bergen, N. J.; The Nevins Co., Clifton, N. J.; The Wilkata Folding Box Co., Kearney, N. J. Bottles—Diamond Glass Co., Royersford, Pa.; Owens-Illinois Glass Co., Toledo; Armstrong Cork Co., Lancaster, Pa. Closures—Armstrong Cork Co., Owens-Illinois Glass Co., Mack Molding Co., Wayne, N. J. Labels—The Nevins Co. Talc cans—American Can Co., New York, and Continental Can Co., New York. Foam Shave aerosol can—Crown Can Co., Philadelphia; valve, Precision Valve Corp., Yonkers, N. Y. Collapsible tubes—Sun Tube Co., Hillside, N. J., and Peerless Tube Co., Bloomfield, N. J.

The Wolf award, presented by Irwin D. Wolf, vice president of Kaufmann's, Pittsburgh, was formerly given during the '30s through the American Management Assn. It was revived this year by PDC as a grand prize for outstanding recognition.

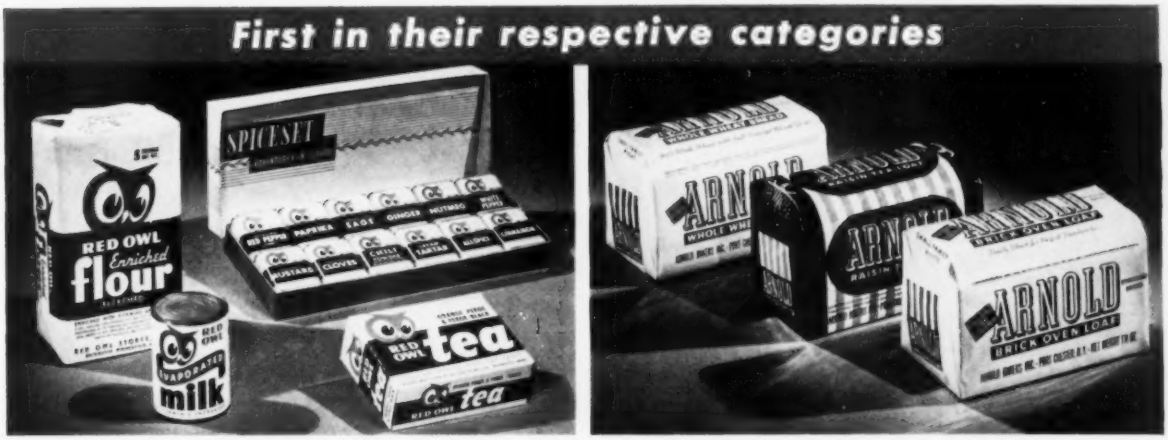
1. Coordinated Packaging Program—*Top award:* Red Owl Foods Line, designed by Jim Nash, New York, for Red Owl Stores, Inc., Hoskins, Minn. Suppliers: Cans, American Can Co., New York. Bags, Bemis Bro. Bag Co., St. Louis, Mo. Bread wrapper, Rapinwax Paper Co., Minneapolis, Minn. Labels, U. S. Printing & Lithograph Co., Cincinnati, Ohio.

Honorable Mention: Right Time Toys, designed by Stanley Goldman & Edgar Herz, New York, for Childhood Interests, Inc., Roselle Park, N. J. Supplier: Box, Downington Paper Box Co., Downington, Pa. *Honorable men-*

tion: Rath Meats line, designed by Jim Nash. Suppliers: American Can Co.; Waldorf Paper Products Co.; West Carrollton Parchment Co.

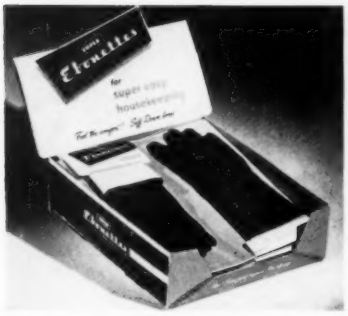
2. Grocery self-service package—*Top award:* Arnold Bread line, designed by Charles C. S. Dean, New York, for Arnold Bakers, Inc., Port Chester, N. Y. Supplier: Wraps, Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich.

Honorable mention: Armour Star Oil, designed by Raymond Loewy Associates, New York, for Armour & Co., Chicago. Supplier: Continental Can Co., New York. *Honorable mention:* Field Foods Family, designed by Will Johnson, Baker, Johnson & Dickinson, Milwaukee, for Field Packing Co., Owensboro, Ky. Suppliers: Milprint, Inc., Milwaukee, Wis.; Continental Can Co., New York; Kalamazoo Vegetable Parchment Co., Kalamazoo, *(This article continued on page 204)*

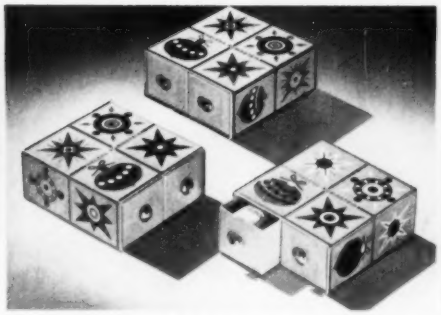


COORDINATED PACKAGING PROGRAM
Red Owl Foods line, designed by Jim Nash, New York.

GROCERY SELF-SERVICE PACKAGE
Arnold Bread line, designed by Charles C. S. Dean, New York.



SELF-SERVICE DRUG PACKAGE
Ebonettes rubber glove display carton, designed by Raymond Loewy Associates, Chicago.



SELF-SERVICE COSMETIC PACKAGE
Helena Rubinstein Lucky Draw Perfume package, designed by Eric de Kolb, Helena Rubinstein, Inc., New York.



MISCELLANEOUS SELF-SERVICE PACKAGE
Sue Ann Foods' Continental Cheese Assortment, designed by Archie M. Schrom, Chicago.

DEPARTMENT STORE SELF-SERVICE PACKAGE
Martex Terry Tweed towel pack, designed by the John & Earline Brice Design Studios, New York.



REDESIGN PROJECT—OLD AND NEW
King's beer labels (Montreal, Canada), designed by Jim Nash, New York.



NEW PACKAGE FOR A NEW PRODUCT
Monsanto's Folium, designed by Rudolph Czufin and Albert Quinlan, Gardner Adv. Co., St. Louis.



Boy, am I getting FRIED!



IT'S not this little piggie's fault that he's doomed to wind up in a club sandwich. It's just that bacon looks so good to so many people when it's wrapped in PLIOFILM.

PLIOFILM clings to bacon or any meat product without a trace of sag or wrinkle.

Because of its remarkable moisture-resistance, PLIOFILM won't shrink or stretch when exposed to showcase moisture. There's less smearing—less fogging—even when wrapping greasy products like ham or pork.

More than that, PLIOFILM is tough. It takes plenty of handling abuse without puncturing or splitting. It seals in taste, aroma, bloom. And its positive film-to-film seal is virtual insurance against rewraps.

Could your product benefit by these PLIOFILM advantages? Especially when their relative cost is usually even *less* than that of conventional films? The Goodyear Packaging Engineer will be glad to work with you in designing a PLIOFILM wrap specifically for your problem. Write him at:

Goodyear, Pliofilm Dept. K-6418,
Akron 16, Ohio.



HERE'S YOUR TROUBLE SHOOTER

Got a packaging problem? The Goodyear Packaging Engineer can help you solve it by designing a PLIOFILM wrap that's made especially for you. Write or wire him today

PLIOFILM—*a better wrap for all types of meat*



FRANKS



MEAT LOAF



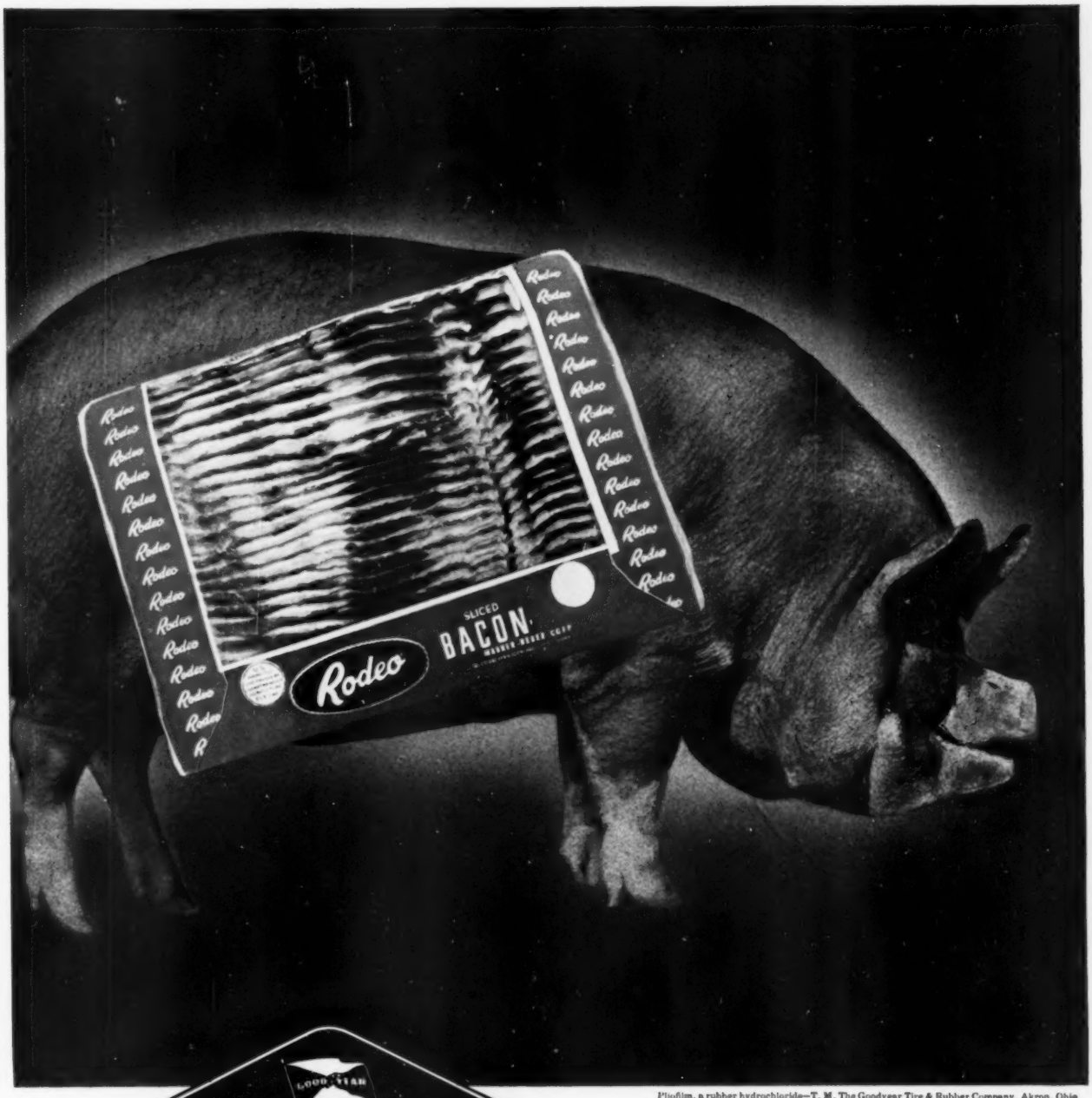
POULTRY



SMOKED HAMS



ROASTS



Pliofilm, a rubber hydrochloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

GOODYEAR
PACKAGING
FILM

Good things are better in

Pliofilm

3-way protection against air, moisture, liquids

We think you'll like "THE GREATEST STORY EVER TOLD"—every Sunday—ABC Radio Network—THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network

Fertilizer up front

Bandini's 44 products get a trademark and design that retain identity on any package type, size or color

Revamping its entire line of packages—which vary in weight from 4 oz. to 100 lbs.—has enabled Bandini Fertilizer Co., Los Angeles, to get its products out of the back rooms and up front where sales have been stimulated through name identification and impulse purchases.

A new trademark, plus the liberal use of color on what had previously been an unattractive package, indistinguishable from competitive products, was the key to the redesign of the line.

The new trademark incorporates a revitalized trade character, "Bandi." The new character was designed so it retains its identification and legibility whether used in one-color, one-column newspaper advertisements or on three-color signs developed for use by nurseries as a part of the over-all program.

Designing a package line with strong identification and sales value was complicated by the fact Bandini sells more than 44 different types of fertilizers, insecticides and dusts. Most are solids, but some are liquids. Also, most of the solids are sold in at least six of seven units of weight: 2½, 5, 10, 25, 50, 80 and 100 lbs. Liquids sell in units of 4 oz., 8 oz., 1 pint, 1 quart, 1 gallon and 5 gallons. Bags are used for the solid products, while liquid products come in glass bottles and jars.

Previously, bulk solids were sold in natural kraft bags carrying the trademark on the face of the bag. Bandini products were stacked with competitive items and indistinguishable except upon close examination. Too, since fertilizer products are typically scattered about a nursery, family identification was lost.

All bulk items are now packaged in bleached white flat kraft, printed in three colors. The basic label of each package is the same, but in different color combination and reproportioned according to size and shape of the specific package on which it is used. Nine schemes, calling for 19 colors, are used to identify different types of items. The objective is to have a trademark and family design which retain their identity as Bandini products regardless of the size or color of the package used.

The basic design consists of three elements:

1. A new trademark incorporating the redesigned trade character, the company name and the slogan "Since 1927." Previously, the company used a character that was static and somewhat old fashioned in appearance. Nor did it stand out on the package. Now, the design focuses on the character, a whimsical standing steer wearing an apron imprinted across the top with the name "Bandi" and leaning against a spade.

2. V-shaped directional color areas which point to a copy block beneath.

COMPARISON with old package (left) shows how new trademark and design have increased the sales appeal of an unglamorous product.



PHOTOS: TINSLEY JEPSON

3. The copy block which telegraphs reasons to need and buy the specific product in the package.

Each package is unmistakably a Bandini item. The name of the item is repeated on the sides and bottom of the package so that no matter how stacked or palletized, the nurseryman can identify it at a glance. This saves time and effort in serving customers and simplifies inventorying. When stacked, Bandini products present a uniform, highly attractive and colorful display that catches the eye of the passerby.

The result has been a tremendous increase in the display of Bandini packages "out front" and a consequent increase in impulse sales. There are also many more Bandini displays consisting of each of the bagged items.

Such prosaic but sales-important bulk items as steer manure and peat moss get more display on the street. These displays greatly increase the effects of television and newspaper advertising because they serve as reminders at the point of sale. Formerly slow-moving items such as dichondra food and other specialty items, which before were packed in general-purpose bags, have showed gratifying increases in sales when they are placed in their own individual bags.

One of the big problems in the revamping was color control. Since great stress was placed upon color selection and combinations, it was essential that the original conception be maintained. The objective being a permanent package, the package sketches were of no value unless they were followed on the 1,000,000th package as faithfully as they were on the first to be printed.

The problems of control are multiplied by the use of various combinations of 19 colors and the fact that a number of ink companies are involved. To the greatest degree possible, colors used on a specific item are appropriate to the product, as an aid to its individual identification; i.e., green on dichondra (a ground cover), brown tones on humus, blues on chemical products.

Being sold in nurseries and displayed and stored outdoors, the colors had to be such that they stand up when exposed to California sunshine. Thus, all inks used were pre-tested for fading. As a result, many inks required reformulation. In one case an ink which faded badly in a matter of hours when exposed was reformulated so it stood up as well for 30 days as it had previously for 30 hours.

To insure that the original sketch colors remain unchanged, each ink was okayed before the first run. The package designer maintains a complete color file out of the light. As each run of packages is made, the supplier is required to send samples to the designer. These are carefully checked against the control file and any deviation is immediately corrected.

The success of the revitalization of Bandini's packages is evidenced by this fact: the company is now extending its area of operations and a most important factor in selling the line is the fact its packages are attractive, colorful, lend themselves to display and impulse sales, and are immediately identifiable as to family and item.



FAMILY RELATIONSHIP is achieved with all the Bandini bagged products, with distinctive color differentiation for each of the various items.

BOTTLED PRODUCTS in all sizes retain family identity. Arrow shape of trademark color band carries the shopper's eye to product-identity line.



CREDITS: *Package design program, Tinsley T. Jepson & Associates, 35 N. Raymond, Pasadena, Calif. Multiwall sewn bags, St. Regis Paper Co., 230 Park Ave., New York 17; Fulton Bag & Cotton Mills, P.O. Box 1726, Atlanta 1, Ga.; Bemis Bro. Bag Co., 111-H N. Fourth St., St. Louis 2, Mo., and Crown-Zellerbach Corp., 2945 Twelfth St., Los Angeles. Automatic style bags, Shellmar-Betner Div., Continental Can Co., Mt. Vernon, Ohio. Folding cartons, Standard Paper Box Corp., 3837 Broadway Pl., Los Angeles 37. Labels, Western Lithograph Co., 600 E. Second St., Los Angeles 54.*



1. ALUMINUM-FOIL WRAP insures better protection against the possibility of moisture, grease and galvanic corrosion.



2. SILICA-GEL BAGS to absorb moisture are folded and taped around the foil-wrapped assemblies.



3. CELLULOSE CUSHIONING is rolled around taped assemblies.



4. WATERPROOF DECALS provide identification for cans.

5. AN ORDNANCE APPROVAL stamp is affixed after sealed cans are tested for leaks under water.



Canned watches

Army Ordnance new moistureproof, shockproof Method II pack withstands long-term storage

An interesting application of the desiccant principle to protective precision packaging is the new assembly for Navigation Master watches, manufactured by the Hamilton Watch Co., Lancaster, Pa., for the Army Ordnance Corps.

Watches, wrapped in aluminum foil, bags of silica-gel crystals and laminated cellulose cushioning material, are now sealed in cans to protect them in transit to all parts of the world and to preserve them during long periods of storage under extreme atmospheric conditions.

Until the Ordnance Corps developed the new packaging specifications recently, watch storage presented a serious problem. Despite numerous precautions, watch parts rusted in storage and required replacement of parts before the watches could be re-issued for use. The new can package is reported to eliminate costly rebuilding of watches before re-issue.

VCI materials could not be used with watches because they contain many non-ferrous parts, with which VCI chemicals react unfavorably.

Foil was selected as the primary wrap around the watches, it is reported, to insure better protection against moisture, grease and galvanic corrosion.

Bags of silica gel to absorb moisture are folded around the watches and taped into position. Small lots of watches are processed rapidly to reduce deterioration of the desiccant to a minimum. Taped assemblies are rolled in two layers of cellulose cushioning material and stuffed into No. 2 size cans. The cushioning must fill out can interiors.

Following sealing, the filled cans are tested under water for leaks before being labeled with waterproof decalcomanias. Entries of date and serial number are applied to the labels with waterproof ink. After Ordnance inspection finished packages, bearing Ordnance approval stamps, are ready for long-term storage.

CREDIT: *Aluminum foil, Reynolds Metals Co., 2500 S. Third St., Louisville, Ky. Protek-Sorb desiccant, The Davison Chemical Corp., 101 N. Charles St., Baltimore, Md. Kimpak cushioning material, Kimberly-Clark Corp., Neenah, Wis. Pressure-sensitive tape, Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul, Minn. Cans, American Can Co., 100 Park Ave., New York 17. Decal labels, Palm, Fechteler & Co., 200 W. 42 St., New York.*

15th Annual Forum of the Packaging Institute — Hotel Statler—October 12-14, 1953

Meeting for the first time in a new setting—the sky-top conference halls of the Statler Hotel, New York—the 15th Annual Forum of the Packaging Institute reached a new high in attendance and interest. A rough count showed registration of 1,188 at the end of the three-day meeting, an increase of nearly 100 over last year's record figure. Sixteen separate sessions were crowded into the program, with as many as four running concurrently.

Having completed the maximum of two terms, during which the Packaging Institute accomplished the greatest growth in its history, Robert de S. Couch of General Foods Corp. retired as president and and was succeeded by F. S. Leinbach of Riegel Paper Corp., previously a vice president and long one of the guiding forces behind the Institute. The board of directors elected Herbert T. Holbrook of Standard Packaging Corp. to fill the vice-presidential vacancy and re-elected R. Chester Reed of The Texas Co. as a vice president. Dr. Laurence V. Burton was retained as executive director.



F. S. Leinbach, *new Institute president.*

The Forum was called to order Monday morning by E. H. Balkema of the Colgate-Palmolive-Peet Co., program chairman, who introduced retiring President Couch. In his annual report President Couch disclosed plans to extend the direct activities of the Institute outside of New York, to give it more of a national scope. The first step, Mr. Couch said, will be a series of half-day and full-day Institute conferences in other cities. This may be followed, if interest warrants, in the establishment of local chapters of the Institute.

Mr. Couch reviewed in some detail the activities of the many Packaging Institute committees and reported that the new and revised Glossary would be ready for distribution within the next year. The membership roster this year has undergone careful scrutiny, he said, with the result that members who have ceased to give financial support have been dropped from the rolls. Despite this, the number of company members during the year increased from 345 to 353 and with a growing number of associate (individual) memberships, the total roster is 546. A drive will be made to add 200 company and individual memberships this year, he said.

The new slate of directors, proposed by Charles O. Kendall of Becton, Dickinson & Co., chairman of the Nominating Committee, was approved without dissent. New directors, elected for three-year terms, are A. Douglas Murphy of Esso Standard Oil Co., chairman of the Petroleum Committee, and R. J. Dahl of E. R. Squibb & Sons. Re-elected were Mr. Balkema; Walter F. Daley, New Haven Pulp & Board Co.; Roger V. Wilson, Continental Can Co.; Horace T. Baker, Hudson-Sharp Machine Co.; Mr. Holbrook; and T. A. Torrence, Aluminum Co. of America.

The keynote address on Monday morning was an inspirational "off the cuff" talk by Clarence Francis, chairman of the board of General Foods Corp. Mr. Francis decried the kind of business gossip that seems to be constantly concerned with signs of recession—with the negative rather than the positive factors in our economy. Against the various negative elements that are currently being talked about, he balanced positive forces which lead him to conclude, he said, that regardless of the type of stimuli we shall have continuing good business.

"Our economy," Mr. Francis said, "is run by people—not by equations." The equations, he pointed out, called for eight million unemployed after World War II and instead we had the greatest business growth in our history. The unstable elements of the last depression, he said, no longer exist. Business awareness of conditions is a great safeguard. What happens to our economy, he declared, is largely the result of the attitudes of people and he made a strong plea to packaging executives to exert leadership in maintaining a positive and dynamic attitude.

The Georgian Room was completely filled for the Monday luncheon at which Walter Williams, Under Secretary of Commerce, was the featured speaker. Drawing a Columbus Day analogy, Secretary Williams declared that the qualities exhibited by Columbus—courage, knowledge, persistency and faith—are still the demands made upon leaders today who are looking toward new horizons.

He stated the present problems of the Government as three: (1) trying to restore a sound money system; (2) maintaining an independent Federal Reserve System and (3) achieving a balanced budget. He pointed out specific steps that the Government is taking toward these goals.

Paying tribute to the ingenuity of the $10-billion containers and packaging field, Mr. Williams declared that it is believed to be today the single largest raw-materials consumer, on a composite basis, of all American industry.

With a box full of amusing exhibits at Wednesday's luncheon, J. Frank Stephenson, general manager, Kraft Containers, Ltd., Canada, warned of possible consumer repercussions from too much packaging. Excessive overpacking, like multiple overwraps on chewing gum or the elaborate gift presentations for "microscopic" bottles of perfume, he contends, could result in "less goods to pack," if manufacturers do not "pack for less."

Mr. Leinbach, the new president, announced two important appointments at Wednesday's luncheon: Mr. Balkema as chairman of the Technical Operations Committee and Frank Cray, International Printing Ink Div., Inter-

chemical Co., as chairman of next year's Program Committee.

Wednesday afternoon was devoted to committee meetings, some of which were open sessions attended by many of the Forum registrants.

The date set for next year's Forum is Oct. 25-27, Hotel Roosevelt, New York.

Following is a digest of proceedings, covering all of the prepared papers on the Forum program:

PACKAGE PRINTING SEMINARS

I. Evaluating Quality of Printing on Packaging Materials. *Chairman,* FRANK W. CRAY, *vice president, International Printing Ink Div., Interchemical Corp.*

Status of the Packaging Institute Fade-Ometer Test—C. A. REYNOLDS, JR., *S. D. Warren Co.* The work of the Fade-Ometer Committee is complete, according to Mr. Reynolds' report, and the Proposed Test Procedure (PI Printing 2p-51) has been offered to the Steering Committee for approval with the recommendation that this Procedure be referred to the Technical Operations Committee for release as a Packaging Institute *Tentative* Test Procedure.

A Method for Testing the Ink Rub Resistance of Printed Packaging Materials—L. R. AYERS, *Robert Gair Co., Inc.* The various steps in procedure for using the Sutherland Rub Tester were outlined by Mr. Ayers. First is the selection of samples which, Mr. Ayers said, should be brought to equilibrium standards for atmospheric conditions. Testing should be done with dry samples. Careful handling is essential to avoid perforation or chipping. Grain directions must be considered and samples must be selected consistently with relation to printed copy. When the samples are properly aligned in the test block, the effect of rubbing is observed by the rubbing strokes of the testing device on the sample. The device operates up to 80 strokes. If a longer test is desired, the testing operation may be repeated on the same sample a second time. By such testing it is possible through comparative tests to establish acceptance limits and note the degree of transfer, wear and scratch.

Final Report on Alkali Test for Printed Packaging Materials—A. H. TWARDOWICZ, *The Lord Baltimore Press.* The purpose of an alkali test is to determine what effect alkaline materials have on printed packaging materials, such as paper, wrappers, labels, liners, cartons and containers, said Mr. Twardowicz. Many substances may cause discoloration of the printed areas or of the black areas on the paper or board because of the alkaline content of the packaged product. Our test is a spot reaction test, producing rapidly an indication of the susceptibility of a printed package to any alkaline substances with which it may come in contact. Some products give off vapors over a period of time while in storage, thereby gradually attacking the printed package, causing discolorations of the inks or unprinted paper or board. As a safeguard, the long six-month storage test should be made, especially on all new jobs, even when the results of the quick-alkali test indicate that the printed package is presumably safe from discoloration by its alkaline contents.

A few things should be carefully done to duplicate the test results. Keep the standard stock solution of 1% NaOH in an alkali-resistant glass bottle. In many types of glass, an alkali solution becomes contaminated with dissolved silicates after being stored. This affects the strength of the solution and gives false results while testing for alkali resistance.

In applying one drop of the different strengths of alkali solution to the test area, you can use as many drops of each solution as you desire. The more drops you use, the more conclusive the results. One drop for each strength of solution can lead to false results.

Survey of Instrumentation for Color Control in the Packaging Field—F. L. WURZBURG, JR., *International Printing Ink Div., Interchemical Corp.* Experiences of the Color Control Committee with one or more of at least 10 types of instruments indicate that instrumentation is limited in its use to three aspects of color control: (1) Maintenance of working standards to prevent drift over extended periods of time. (2) Control of board brightness. (3) Control of ink film thickness on the press.

The only instrument which is used to any appreciable extent for the maintenance of working standards to date is the G.E. Recording Spectrophotometer. Although the G.E. Brightness Tester is the standard instrument on which paper brightness specifications are based, considerable use is made of simpler instruments with appropriate filters, such as the Photovolt, for routine production control.

There has been increasing use of simple photometric or densimetric measurements for the control of ink-film thickness in production during recent years, such as the Densichron.

Attempts to use colorimeters for the specification of color and color tolerances have not, to date, met with much success except when used for the more limited purpose of film thickness control. The committee feels that instruments and techniques have not yet reached the stage where it is practicable to employ numerical specifications for color of packages.

The Color Control Committee has adopted two problems on which it hopes to work during the coming year: (1) to formulate recommended procedures for the maintenance of working standards and (2) to tackle the problem of standard conditions of illumination both for inspection and production.

Proposed Modification of Method of Test Resistance of Ink on Printed Packaging Materials to Fats and Oils—L. K. BURNETT, *The Ohio Boxboard Co.*, and DR. JOHN M. RAMSBOTTOM, *Swift & Co.* A modification of Packaging Institute Test Procedure PI Printing 3p-51, "Testing Resistance of Ink on Printed Packaging Materials to the Product in the Package," is proposed by a special task subcommittee of the Products Resistance of Printed Packaging Materials Committee.

The task committee is composed of representatives of nine companies that are manufacturers or users of printed packaging materials for packaging products containing free oils and fats. The proposed modification was arrived at by taking the best features of the methods being used by these nine companies for testing printed packaging materials for use with such products.

The purpose is to evaluate product resistance of ink on printed packaging materials to bleeding, transfer, rubbing or fading, or other color changes resulting from contact with products containing free oils and fats.

The method consists in holding the product to be packed in intimate contact with the ink on the packaging material being tested for 16 hrs. at 98 deg. F. ±1 deg. F. It calls for suitable modifications in the conditions by mutual agreement between purchaser and vendor.

An alternate method for evaluating rubbing resistance of printed packaging materials in the presence of fats and oils, also proposed, consists of rubbing filter paper saturated with the fat or oil in the product over the ink with a Sutherland Rub Tester or by hand, and noting any changes in the printed material or the filter paper.

II. Coordination for Planned Packaging—*Chairman,* ROBERT G. NEUBAUER, *president, Robert G. Neubauer, Inc.*

The Client Challenges the Designer—ROY W. TILLOTSON, *art director, Union Carbide & Carbon Corp.* The aim of the art director in a manufacturing concern is to coordinate all art—advertising, merchandising and packaging. He is in a position to know the company's policies and its limitations. He knows that without good package design, sales can be defeated; that advertising brings people to the product and that merchandising brings the product to the people. Packaging, thus, is mer-

chandising. The art director can keep things down to earth, yet leave the way open for new creative thinking.

He prefers a designer who sticks to the problem, yet brings in fresh ideas in sketch form. This is the time when preliminary checks can be made, when suppliers can be called in to eliminate the production pitfalls. When all factors are nailed down, the designer can get to work on the comprehensives. These are best when presented in complete form—a dummy that shows all sides of the package. This gives an opportunity to coordinate the new package with all other promotion. Better design really sells and efficient handling of the package planning saves money.

Designer is the Coordinator—MR. NEUBAUER. Better planning can be done when the client lets the designer in early, when he gives the designer all the essential information and when he selects the designer as carefully as he would select a wife. The designer can be of invaluable assistance in effecting closer cooperation between the several suppliers who may be concerned with a certain design project.

Mr. Neubauer gave several illustrations showing what happens when package planning is not coordinated and the advantages when all three—designer, client and supplier—are all on the same track early in the game.

Improvements in the graphic arts—surfaces, inks, processes combined with the proper decisions—put endless opportunities at our fingertips. But most of us can dig up examples of improper decisions resulting in mutual disappointment.

A client indicated that not only was the same amount of money available for packaging as in the previous year, but it was felt that a fraction more could be spent for the perfect package. Actually the design approved was for a slightly less expensive container. For the given product a rigid set-up box was specified to increase display value, extend quality presentation, to make display of product easy for dealers and to provide a practical after-use container for the product.

All planning went ahead on this basis until too late to replan functionally and a most ineffective container was decided upon (a client decision). Result—far from the ideal sought. Cause—lack of coordinated planning.

Another case involves a client, designer and supplier all working along the same lines. The assignment was to make an "appetizing, mouthwatering, realistic" package. At first the specifications called for three colors to achieve a near full-color effect. The supplier elected to use six colors at a three-color price to turn out a very satisfactory result. A surprise came when at a crucial moment a larger, less expensive run was required. The supplier produced even better results with the originally specified three colors. (The designer was co-ordinator.)

Another design called for the use of the silver color to show through the uninked areas on tinplate cans. Not negative thinking, but rather realistic looking ahead on the part of client and designer, caused some trouble shooting to take place. The worry was what would happen if the tinplate had to be replaced with black iron. A study of coatings on metal made by the supplier assured very satisfactory results in the event that a switch might have become necessary.

Attaining the Desired Package—EDWARD BEIDERBECKE, *production supervisor, Bloomer Bros.* True craftsmanship in today's machine production depends on many experts—technicians with knowledge of paper making, ink manufacture, the operation of printing equipment. Producing identical packages from 10,000 to 10,000,000 involves a vastly complex operation. What a supplier wants to do and can do depends on the coordination of the productive efforts of his suppliers.

It is never too early for the user of package printing to bring his ideas to the supplier to see how they may be carried out or what alternative ideas must be explored to produce the best results at the most economical costs. A look-see at a sketch is a big help in avoiding the pitfalls of impractical ideas.

On very large runs it is sometimes necessary for the same package to be produced in several plants. How closely the millions that are to be turned out can be made within tolerance limits of the original often depends on the type of design and selection of colors that are specified in the beginning. All factors must be related to the materials that are to be used, the inks and the process. Oftentimes more uniform quality can be achieved, but it may be questionable whether a closer approach to perfection is economic.

One customer once complained because the shipping container in which he was receiving his cartons caused damage to about four cartons per thousand which had to be thrown away. The complaint was investigated and it was found that by the use of a more expensive shipping carton the spoilage could be eliminated, but in this case the additional cost of the improved shipping container would have been considerably more costly to the customer than the waste of the four cartons per thousand.

III. Printing Processes. *Chairman,* J. M. KERNAN, *The Ohio Boxboard Co.*

Formulating and Testing Printing Inks for Use in Printing Corrugated Cases—J. C. CAVANAUGH, *assistant to vice president, J. M. Huber Corp.* Corrugated inks made for printing on a printer-slotter are made up of two basic elements: a color element and a film-forming element, Mr. Cavanaugh said. Assuming that the ink maker has made the proper selection of pigments to meet the color requirements, the film-forming element becomes of paramount importance. It is in the selection of materials for the film-forming element that the final outcome of a printed job is principally determined. Modern oil-type corrugated inks exhibit the highest degree of scuff resistance. This is of particular importance in printing containers to be used as reshippers, or for any box where maximum scuff resistance is required.

A second broad classification of materials used in the making of corrugated inks are those materials used to make moisture-set inks. Moisture-set inks sound like the answer to the production man's prayer. Nevertheless, they have certain disadvantages which sometimes outweigh the advantage of speed of production. For instance, they cannot be made with a high gloss or with the degree of resistance to scuffing that can be incorporated into oil inks.

Determining Gloss on Printed Packaging Materials—DR. J. BERTRAM BATES, *Graphic Arts Laboratories, Sun Chemical Corp.* The objectives of the Gloss Committee include the circularizing of information on factors involved in obtaining gloss on the printed package, evaluation of stock for production of gloss, as well as the establishment of a method of measuring gloss, Dr. Bates said. The committee's most recent work concerns latest developments on the last part of the general objectives. A round robin test has been conducted involving the 60 deg. Photovolt and the 75 deg. Photovolt Glossmeters, and a set of gloss specimens of one color on one stock arranged in six gloss steps.

An analysis of the data shows that the average of five readings is significant whereas single readings are not. The instrument readings may be considered different only when the average of five readings differ by more than five units. When the data are so obtained, the instrument is more sensitive than the eye. The data show there is a difference in the way the instruments were used. A 60 deg. Photovolt and the 75 deg. Photovolt arrange the gloss steps in the same order as the eye. The instruments give values of different orders of magnitude.

Things to Come in Graphic Arts—PAUL J. THOMA, *associate technical director, Springdale Laboratories, Time, Inc.* The packaging and publishing industries have both made tremendous strides in the past 20 years in improving the quality of their product and increasing production rates, Mr. Thoma reported. There has been considerably greater progress in improv-

ing letterpress equipment for the publishing field than there has for the packaging field.

The packaging industry is utilizing the gravure and flexographic processes as a means of solving its problems rather than spending money on the development of letterpress equipment.

Improvements now being pioneered in letterpress equipment include: (1) modifications in and simplification of the ink distribution system and (2) development of new types of plates and better methods of locking them on the cylinder to eliminate largely the problem of cracked plates in high-speed production. These and allied developments hold promise of simplified preparation and greatly reduced down time.

Meeting Board Requirements for Folding Cartons—J. J. SCHWENKLER, *technical superintendent, Philadelphia Div., Container Corp. of America.* The trend in customer demand toward multicolor, gloss ink printing with eye-catching design necessitates finer printing surfaces, Mr. Schwenkler said. Present-day filling and sealing machines in packaging plants also present additional problems for the carton manufacturer. Other demands are for product production, stacking strength, freedom from odors, etc.

In order that the board may meet the optimum requirements for press operation it is important that sheet caliper must be uniform across each sheet and throughout the run. Skids or board with any amount of curl are a nuisance. Foreign materials in loads of board must be eliminated completely and yet there are no devices on presses to eliminate trim, dust or debris. Board moisture should be uniform across the sheet and throughout the run.

The appearance of the finished carton is of primary importance to the customer. All defects in the board detract from the carton's presentatibility. In general, however, printing with a large percentage of ink coverage or type will improve the appearance of board with poor liner coverage or wild formation.

Controlling the Printability of Boxboard—J. J. HIGGINS, *assistant technical director of laboratory and quality control, The Ohio Boxboard Co.* A number of factors can be measured to some degree and, therefore, can become a guide or multiple index to printability, Mr. Higgins reported. These are: (1) Levelness of the printing surface. (2) Compressibility of the board. (3) Ink receptivity, subdivided as—(a) ink transfer, (b) level of receptivity, that is, high or low rate of absorption and (c) the uniformity of ink receptivity. (4) Surface bonding.

The importance of controlling these factors which affect the quality of the print is a matter of economics. There must be a minimum of dissatisfied customers and this can only be accomplished by duplication of the customer's standard copy.

IV. Flexographic Printing. *Chairman,* JOHN COZZA, *president, Cello-Masters, Inc.*

Seven Keys to Quality in Flexographic Prin'ing—FRANKLIN MOSS, *president, Mosstype Corp.* There are seven keys to quality in flexographic printing that unlock the door to more profitable production and lower-cost operation, Mr. Moss said.

1. Proper planning. Get all the facts and get them right . . . then decide how you will handle the job.

2. Rubber plates and their components. The work must start with proper artwork and good pattern engravings. The rubber plate can be only as good as the material from which it was made.

3. Inks. Like plates, ink represents only a small fraction of the total cost of a job. It's risky to cut corners on these supplies for the sake of a few pennies' difference in cost.

4. Pre-press preparation. There is no excuse today for shutting down a press while plates are being mounted, registered and proofed. All this preliminary work can be done off the press, while the press keeps running on some other job.

5. Plate cylinders. Unless they are absolutely accurate, a good press, good plates, good inks and all good intentions cannot help you.

6. Printing machine and its auxiliary equipment. You need up-to-date precision equipment if you hope to fulfill the quality ideal and, whenever practical, all those extras and accessories that have been developed to help your press do a better job.

7. Pressmanship. In the final analysis, the quality of your printing must inevitably hinge on the ability and attitude of the man at the press.

Advantages of Printing Folding Cartons by Flexography—NORMAN H. RICH, *vice president, Industrial Packaging Co., Inc.* Advantages of specific dollar saving and production-time saving in folding-box conversion by flexography pointed out by Mr. Rich include: (1) Ease of handling rubber plates. (2) Ability to mount plates in register and to proof a multicolor job in register without losing production time. (3) Ease and rapidity of setting cylinders into a printing machine. (4) Elimination of down-time consumed in make-ready. (5) Ease and reduction of excessive press clean-up time. (6) Ability to produce in-line, multicolor printing, cutting, creasing and stripping. (7) Reduction of handling time and costs by using roll stock. (8) Availability of color-fast, rub-resistant, opaque inks and overprint varnish. (9) Fast-drying inks, permitting immediate handling of printed stock for rewinding, or sheeting, or cutting and creasing, eliminating completely the need for "racking" (drying to eliminate offset and/or blocking) as is done in conventional letterpress printing with oil ink. (10) Low plate costs, low cutting- and creasing-die costs, and low make-ready costs.

"Exhausted" Profits—ROBERT ZUCKERMAN, *Kidder Press Co., Inc.* A survey of Packaging Institute members was made to gather information on the best means for combating deterioration of flexible packaging materials resulting from improper packaging, handling and storage.

The survey pointed out the importance of maintaining controlled conditions of temperature and relative humidity for the entire career of packaging material. Specific recommendations were made for packaging cellophane and glassine bags to prevent deterioration due to moisture loss. Means were suggested to restore partially the moisture which had been lost in the making and storing of the bags.

The problem of how to prevent moisture loss during printing or how to restore it after printing was treated as a separate problem. In this phase of the converting operation—which uses approximately 75 million pounds of cellophane per year—an estimated 1½% of the total weight is being dissipated through the exhaust ducts of the drying systems used to obtain high-speed printing. Much work remains to be done before a satisfactory solution to this problem can be realized.

Increasing Yield of Printed Packaging Materials Through Improved Stability—NORMAN COOPER, *Bensing Bros. & Deeney.* Stability of flexographic printing is a newly coined phrase that covers such problems as: ghosting after printing, operational offset, delayed offset, blocking, bleeding.

A subcommittee of the Flexographic Printing Committee has been created to study these problems and devise methods for their evaluation and control.

By polling the entire Packaging Institute, the Subcommittee on Stability selected blocking as the first to be studied. The plan of the attack on the problem of developing a better test includes testing of greaseproof glassine, MST cellophane, treated 1½-mil polyethylene, cellulose acetate and P-4 Pliofilm with three different inks of strong, average and weak blocking characteristics, under standardized testing conditions. Nine companies are collaborating in the test.

One of the problems is to determine the pressure on the printing in a large roll of material, for on this figure will be based the corresponding test pressure in the laboratory to determine the blocking characteristics. As proposed in the initial

tests, the experimental pressures shall be sufficient to produce (a) failure and (b) second-degree blocking as defined in ASTM D 1146-51T.

Flexographic Printing—The Answer to Quality on a Budget—MR. COZZA. Twenty years ago the flexographic printing process afforded a suitable, although crude, means of printing ordinary paper bags. Today any material suitable for use as a flexible package can be printed advantageously by flexography—if it can be printed advantageously in roll form. This applies particularly to cellophane and the plastic films.

The initial cost of rubber plates used in flexography is much less than that of etched copper cylinders. The cost of zinc engravings or rubber plates is never influenced by the intricacy of the design. The flexographic process can be employed for relatively short runs without making the unit cost prohibitive.

Rubber plates normally have an "official" life of a million impressions, but with proper usage and techniques, Mr. Cozza said, we have been able to get a life of 5,000,000 impressions.

The low-cost rubber plate is more resistant to accidental damage than an engraved cylinder that may be ruined beyond repair by a tiny piece of grit or other hard foreign substance. A rubber plate can be replaced, not only at a lower cost, but in a fraction of the time it takes to make a new cylinder. It has been done in an emergency in less than two hours!

Quality of flexographic printing in the average plant of today is indistinguishable from good letterpress printing. Photographic reproduction in the flexographic process is being done on a production basis in a number of plants.

V. Handling and Storage of Printed Packaging Materials Before Their Use—C. C. SUTTON, *General Foods Corp., chairman.*

Innovations in the Packing Room—HERBERT H. LEMMERMAN, *general store manager, Air Reduction Co., Inc.* Standard package quantities of containers are an asset in facilitating inventory checking and in filling the requirements of departments that order the packages from stores. In our company small chipboard cartons are tied in bundles of 100, then placed in bulk packages of 500, 1,000 or 5,000, said Mr. Lemmerman. Envelopes are in packages of 500 or 1,000. Corrugated containers, being large and heavy, are made up in bundles of 10, 50 or 100, depending on size, and rope tied or wrapped in paper. Containers of special die-cut design that do not stack well on pallets are packaged in a 2-ft. cubical corrugated container to hold a standard number of the smaller ones. The number varies with the different sizes inserted.

First-in, first-out control is assured by code marking every package.

Small metal parts are usually electronically counted and deposited in self-seal envelopes simultaneously imprinted with the contents.

The volume of some items to be packaged in chipboard or solid fibreboard containers may not justify the use of automatic machines to set up, load or fill, close and imprint at 72 a minute. Four people can accomplish about the same production especially if an automatic Scotch-tape dispenser is used.

Automatic "dialing" types of gummed-tape dispensers save time in measuring length, moisten the tape properly and save more time by eliminating lost time for "ironing." Chemical tackifiers, added to the thermostatically controlled water reservoir in the machine, also help to gain speed.

VCI (vapor corrosion inhibitors) applied to paper in rolls, or to bags and envelopes, used for packaging metal parts eliminates the need for grease and oil coatings.

Order picking is facilitated by placing items on four-wheeled shelf trucks which are rolled to the packing stations.

A layered corrugated board, five layers of A-flute forming a 1-in. sheet, has been much used of late with a saving of $25 per unit in packing a delicate electronic machine worth $3,000. In 400 shipments not a single damage claim has arisen.

Handling and Storage Practice for Labels, Circulars and Printed Boxes—PAUL VAN GIESON, *Lederle Laboratories Div., American Cyanamid Co.* A summary of majority practices of eight pharmaceutical manufacturing concerns in methods of handling and storing paper and board printed packaging materials indicates that paper labels, stickers and circulars are usually assembled in bundles of 500 or 1,000. They are reinforced on top and bottom and at each 250 with cardboard, secured with string or paper bands, wrapped in kraft paper and stored on shelves in a packaging-supply area. They are identified by a sample label pasted outside the wrapped bundle.

Printed boxes are received from the manufacturers, packed on edge in rows in corrugated cartons with cardboard dividers between rows and cardboard sheets between layers. The gross weight of the carton does not exceed 50 lbs. They are stored in the original carton on pallets in a warehouse or packaging-supply area and identified by a code number (box or product) stamped on the carton.

No special effort is made to keep the materials under controlled temperature and humidity conditions; apparently normal conditions inside the plant are satisfactory for storage of printed paper and board.

Labels, circulars and boxes are inspected when received for copy, size, appearance, mixtures, quality and quantity. Labels and circulars delivered to the packaging lines in excess of requirements are destroyed if the tied bundles are broken, but returned to storage if the bundles are intact. Excess printed boxes, however, are returned to storage.

How Producers of Printed Foil Would Like to See It Handled in the User's Plant—A. I. TOTTEN, JR., *Research Div., Reynolds Metals Co.* Most problems in users' plants, involving damage to printed foil through improper handling, stem from material in roll form. Most of this damage results in the material not unwinding properly due to edge or surface distortion. Frequent practices that cause trouble on rolls of printed foil are: stacking in tiers five or six high, up-ending heavy rolls, dumping on the floor from shipping boxes, improper hoisting into position for use and throwing boxes from trucks or freight cars.

The producers of printed foil actually ask only that the users will exercise normal good practices in the handling and storing of their materials: (1) Store in a relatively dry and, preferably, cool place. (2) Order so that material is not excessively old when it is used. (3) Use the oldest shipment first. (4) Unwrap labels and wraps as near to the time they are to be used as practical and keep with the *foil side down.* (5) Exercise every precaution to prevent edge and surface damage to rolls.

To establish these practices in users' plants requires employee education. The minor cost of such a program cannot help but pay large dividends.

How Producers of Plastic Films Would Like to See the Printed Product Handled in the User's Plants—I. F. PEAKE, *Film Department, E. I. du Pont de Nemours & Co., Inc.* Handling experience gained over a period of more than 25 years with cellophane should be helpful to users of other printed films for packaging. The wrapper used in printed packaging films should perform two principal functions: (1) Protect from exposure to atmospheric conditions likely to effect changes in the material. (2) Protect from damage in handling.

Where the material as received is afforded this protection, the wrapper should be retained until ready for use and replaced on any unused remainder.

Thermal expansion and contraction in film thickness are particularly significant in roll put-up and suggest the reasons for minimum and maximum temperatures for storage areas.

Changes brought about by exposure to extremes in humidity and the limitations of wrapper protection suggest the advantage of controlled humidity in storage areas and proper inventory.

Proper handling of the product after the printed film is ap-

plied by the user can contribute much to trouble-free performance on the package.

How the Users of Packaging Materials May Help Themselves With the Use of Codes—IRA GOTTSCHO, *president, Adolph Gottscho, Inc.* Package forms are coded in various stages of the packaging operation, said Mr. Gottscho, speaking about two types of coding. A code may be placed on the consumer package or the shipping container during the packaging operation. A code is also used on the packaging material itself, put there by the material supplier. To distinguish the two, I call them Coding and Pre-coding.

The use of pre-coding gains control of packaging materials. These materials must be controlled for: quality, inventory, "first-in, first-out" procedure, economy, legal requirements and to prevent errors.

With slide illustrations, Mr. Gottscho interpreted the various pre-codes: (1) Specification number used by a company's inspection group to check size and shape. (2) Product and text numbers to authenticate the reading matter and be sure that all legal requirements are met. (3) The supplier's symbol and date pre-code to know what plant printed the carton and when it was made. (4) The bleed code to provide a very simple 100% inspection at the packaging machine.

These pre-code and number systems, he said, save raw material, eliminate packaging-supply losses, remove product losses, increase efficiency and prevent errors.

PETROLEUM SEMINAR

Chairman, A. D. MURPHY, *Esso Standard Oil Co., Chairman, Petroleum Committee.*

Quality Control of Can Filling—BOB MELLON, *Gulf Oil Corp.* Mr. Mellon reviewed the theories and principles that underlie the success of micro-adjustment of filling machines to control over-or-under filling of cans. He included some of the material previously presented at the 13th Annual Forum in the paper, "The Control of Lube Oil Can Filling," and described how to decide how much precision is economically feasible and desirable for practical operation of package-filling equipment.

Essentially, a package-filling operation, like every other manufacturing operation, he said, requires a specific or implied decision about acceptable tolerances. Whether or not the products conform to the decision is an inspection problem and can be ascertained. However, inspectors must have specifications and management must supply them. If the tolerances are too tight, either production will suffer or (perhaps more likely) non-conformances will merely be unreported or undiscovered. On the other hand, if tolerances are too lax, there might be waste of material or dissipation of good will.

Mr. Mellon believes that a proper decision should consider: (1) Value of precision. (2) Cost of precision. (3) Risk of not meeting specifications (i.e. "official tolerances"). (4) Cost of not meeting specifications.

High-Speed Drum-Filling Equipment—DONALD T. WHALEN, *The Rucker Co.* The Rucker Co. has developed an automatic drum filler which, in nearly two years of field operation at Standard of California's Richmond Refinery, has shown production ability of from 1,000-1,200 55-gal. drums per 8-hr. shift, according to Mr. Whalen. Requiring but a single operator, the unit occupies little more space than a manual filling station, has automatic controls with safety interlocks; accommodates a wide variety of drum diameters, heights and bung locations.

Mr. Whalen cited three major problems which were surmounted in developing a working unit. The machine had to accommodate drums with heights varying several inches, diameters as much as 2 in. and bung offset from the chime of 1 to 2 in. Compensation for drum tare weights, varying up to 6 or 7 lbs., had to be provided. Then the problem of foaming during filling, aggravated by speed-up, had to be licked.

Solution of these difficulties resulted in a two-station machine. The upstream station is the bung-locating and drum-positioning device. Downstream is the filling station. Drums, traveling in an upright position on a gravity roller conveyor, enter the upstream station. Here two pairs of rolls or gates bear on the top chime of the drum. These gates, actuated by hydraulic cylinders, slowly rotate the drum. A mechanical finger locates the bung and the downstream gate opens to permit movement of the drum to the filling station. Over the filling scale is a lance which descends through the pre-positioned bung, starting the flow of oil at the bottom of its stroke. The filling rate is about 225 gpm and it takes about 28 sec. to fill a 55-gal. drum. Oil discharges horizontally at the tip of the lance which becomes submerged after a few seconds, minimizing foaming. When weight is within a few pounds of full measure, oil flow is cut to a dribble which continues until final weight is reached. The filling lance withdraws from the drum and a drip pan swings beneath it to prevent oil dripping on the drum. The full drum is now pushed from the scale by the next drum.

New Developments in Corrugated and Fibreboard Containers and Adhesion Problems—BURNHAM B. HOLMES, *Ball Bros. Co.* A corrugated or solid fibre case is not an end in itself, but rather a means to an end—the end being to make a sale. This being the case, Mr. Holmes listed 11 steps he would follow if he were writing packaging specifications for a large producer of petroleum products.

He would (1) sell the boss on the full concept of the job; (2) survey the entire field of packaging, including the techniques of his own company and those of his competitors; (3) catalog all his items into classifications by several yardsticks such as consumer, retail, commercial, industrial—large volume, small volume—high profit vs. marginal; (4) develop a list of all possible alternative individual packages, giving full play to the imagination. Then, (5) determine the best number of individual items to the case, determine the alternative styles of cases that might be practical and consider the use of handling or carrying attachments, quick-opening gadgets and the like.

His next suggested step was (6) to reduce all of this material to writing. He recommended (7) a caucus with all department heads to crystalize some pattern of action. His next step would be (8) to employ such outside professional assistance as might be indicated to assist with the final steps of the packaging program and then (9) submit all of this to management for tentative approval. His last two steps anticipated (10) some trial market tests and, of course, (11) the final "wrap up" of the program dealing with the need for timeliness and coordination.

BULK PACKAGING SEMINAR

Chairman, E. F. DIVAL, *Corn Products Refining Co.*

Packaging in Multiwall Paper Shipping Sacks—FRANK POCTA, *executive secretary, Paper Shipping Sack Mfrs. Assn., Inc.* Paper shipping sacks are flexible containers, constructed with one to six plies or walls of shipping-sack papers, often in combination with special coatings, laminants, impregations or other treatments depending on the type and degree of protection required for the product to be shipped, Mr. Pocta said. The sheets from which the sacks are made range from 40- to 70-lb. basis weight. By the use of suitable barrier materials and coatings, the sacks may be made greaseproof, acidproof, insectproof, fireproof, scuff resistant, etc. Post-hardening qualities for sacks used for packaging commodities that, like asphalt, waxes and resins, are poured into the sacks in molten state, require the use of special release coatings to prevent the contents from sticking to the paper.

Five general types of multiwalls are made: (a) The sewn-valve type; (b) the sewn-bottom, open-top type; (c) the open-corner type; (d) the pasted-valve type and (e) the pasted-bottom, open-top type. The paper from which heavy-duty

multiwalls is made is special and is known as Multiwall Bag Grade or, more commonly, Shipping Sack Kraft. This grade is not to be confused with "bag paper" that is commonly used for grocers' type bags. Shipping-sack kraft has high tensile strength and high tear resistance.

Packaging in Textile Bags–JOHN P. GRADY, *Chase Bag Co.* Cotton bags are important factors in many industries today, Mr. Grady said. Millions and millions of yards of cloth are used annually to package the following commodities: formula feeds for livestock and poultry, flour for bakers and grocery-store distribution to consumer, minerals for industry and national defense, fertilizer and seeds for farmers, sugar for industry and consumers, salt, cornmeal, rice, etc., for consumers everywhere.

The success of cotton bags made from attractive dress prints opens up new markets and American exporters will be better able to sell their products in foreign fields when the products are shipped in cotton bags that can be made into attractive, useful clothing by the ultimate foreign buyers.

Various types of paper band labels are now in use, designed to cover many sides of the textile bag. No matter how the bag is placed in the retail store, the brand shows.

Because textile bags are returnable containers (e.g., burlap bags), or re-usable containers (e.g., cotton bags), the new packaging engineers in the textile-bag field must have facts and figures to assist packers and emptiers of textile bags. They must be able to supply information on how to obtain the greatest *savings* in the sale of empty bags to dealers or the greatest savings in the consumer conversion of the empty bags into useful articles for the home or wardrobe.

Packaging of Liquid Products in Steel Drums–CARL E. PRUETT, *Engineering Service Div., E. I. duPont de Nemours & Co., Inc.* The large-scale shipment of liquid products in steel drums demands careful attention to many details, both from the standpoint of customer satisfaction and low cost, Mr. Pruett said. Keeping costs low requires continual review of purchasing, inspection, materials handling, filling, warehousing, carloading and distribution. The location of using plants influences the selection of a drum supplier. The use of complete drum specifications and a thorough inspection system will assure high-quality empty drums.

The careful selection and use of mechanical drum-handling equipment will keep handling costs at a minimum. The protection of product quality governs selection of drum material.

Customer requirements dictate drum size and construction. The selection and layout of filling equipment are based on the handling characteristics of the product and the desired capacity. Carloading practices and shipping methods are determined by the distribution pattern. The satisfaction of the customer requires a periodic check on the condition of the drum and its contents at the point of use.

Packaging Dry and Semi-Solid Products in Fibre Drums–GLENN MATHER, *secretary, Fibre Drum Mfrs. Assn.* When fibre drums are utilized for bulk packaging, many basic factors must be considered, Mr. Mather said. Content weight may range from a few pounds up to 400 lbs. Diameters range from 8 to 23 in. Capacities may range from 1/10 up to 10 cu. ft.

Closures may be by gummed-paper or cloth tape, pressure-sensitive tapes, metal stitches, staples, lugs, rings or other fasteners. With some types, nails are used. And, growing in popularity, are lever-actuated locking bands–now offered by at least five drum makers.

Mechanized handling of fibre drums can be attained on a production line with little or no change in modern equipment. An installation in Ontario, for exemple, vacuum fills 10-ply fibre drums with 50 lbs. of a light, fluffy explosive powder. The drum's capacity is 2.4 cu. ft. It weighs only 8 ibs. Without the vacuum fill a much larger drum would be required. Equipment has been developed for vacuum filling of large-capacity drums up to 55 gal.

Much greater use of color printing, labeling and spray painting is predicted for the future. Silk-screen printing, with or without spray painting, offers many possibilities at a nominal cost. Neatly printed lithographed labels can be expertly applied by the drum manufacturer.

Drop tests at graduated distances are the most widely used testing methods. Diagonal drops of filled drums tell whether the drum "has got what it takes." For testing the performance of bag liners in fibre drums, the modern vibrator table is frequently used as a first step.

Pending before rail and motor-freight carriers is a proposal to use viscosity determinations at certain temperature ranges for packaging-specification purposes. Under this proposal, semi-liquids would have a minimum viscosity of 5,000 centipoises. The viscosity of water is one centipoise.

DRUG AND PHARMACEUTICAL PACKAGING SEMINAR

Chairman, DR. JOHN C. BIRD, *Lederle Laboratories Div., American Cyanamid Co.*

Some Unusual Packages and Their Development–A. R. SCHETTEL, *E. R. Squibb & Sons Div., Mathieson Chemical Co.* A review of the grief that precedes the development of a successful package was presented by Mr. Schettel. A survey was made among drug and pharmaceutical members for case histories of unusual problems or packages that resulted in a better or more highly valued package, or possibly a package that did not click. Each response tells the history of a package, from the original idea to final acceptance by the trade or the decision that the package be abandoned.

In each presentation the cooperating companies wrote up: (1) The original idea–about the package and its need. (2) The amount of "heavy thinking" required before starting experimental work. (3) Something about the experimental work done–trial molds, experiments, tests, successes, failures. (4) The proper packaging material that was finally selected. (5) Length of time required to perfect the package. (6) Pilot runs and "bugs" that were encountered in production. (7) Approximate sums paid out for creative work, when this information was available. (8) Reception by the trade–or why it was not favorably received, or reasons for not pushing the package.

Printing On Glass Parenteral Injection Containers–L. H. ZAHN, *Ciba Pharmaceutical Products, Inc.* This paper was confined to this type of containers because their end-use handling is entirely different from the usual glass printed container. It was slanted to both the drug industry and the machinery manufacturer, showing the needs of the industry and why. It also explained to the industry what problems the machine manufacturer is confronted with.

Mr. Zahn brought his listeners up to date on the historical trend from paper-labeled ampoules to printed ampoules. The requirements of this type of printing for drug products were discussed, with full explanation of the many sterilizing agents used in hospitals in which the printing must be indestructible.

Various test procedures were presented under which all new printing samples are placed, or present printing is quality controlled.

The pros and cons of pre-printing ampoules and vials were brought out into the open. It was questioned if we (the industry) are a little stuffy about this subject. Latest news on two revolutionary ideas was presented on labeling of injectable containers. One was a paper-backed foil label and the other a new photographic method of transferring the printed design.

Present and Future Use of Types I, II, III and IV Glass for Sterile Products Including Biologicals–Panel Discussion led by H. EARL NACK, *Sharp & Dohme, Div. of Merck & Co.* The types of glass discussed included Type I, borosilicate

"hard" glass; Type II, soda lime "common glass, sulfur treated to surface harden; Type III, soda-lime "common glass," untreated; and Type IV, soda lime "common glass," sulfur treated in the larger capacities.

A few years ago it was taken for granted that all sterile products should be packaged in Type I glass. The gradual movement into Type II and Type III glass containers deserves study. This trend no doubt has been accelerated by the introduction of the antibiotics in powder form which are compatible with Type II or Type III glass up to the time of restoration and, when restored, are used immediately.

The need for economy in the highly competitive antibiotic field has had much to do with the movement away from the more expensive glass containers. The wide divergence in usage and the difference of opinion now existing as to the type of glass to use on a given product, or group of products, has encouraged the Sterile Glass Subcommittee of the Drug and Pharmaceutical Committee to issue a questionnaire to survey the current situation.

To cite one example of the problems revealed by this survey, companies A and B are marketing an identical product. Company A uses Type I glass while Company B uses Type III. Question: Is Company A spending too much for glass containers, or is Company B wrong in using the less expensive glass? The solution to this and many other problems were discussed in detail.

Completed questionnaires from 25 companies, large and small, were analyzed. For discussion purposes, the many products involved were broken down into the following categories:

1. Freeze products—filled as liquids and dried by freezing.
2. Dry products—filled as a powder.
3. Sterile solutions for injection or topical use.
4. Biologicals—human and veterinary.

The answers to the questionnaire show that in identical categories due to: (a) company policy, (b) lack of stability testing, (c) the nature of the specific product or (d) other reasons, some companies are using the less expensive glass. Others continue to use Type I glass.

Hypodermic Needles Standardization of Nomenclature, Testing Methods and Statistical Control—H. Earl Nack, *Sharp & Dohme, leader of panel discussion.* While we realize that terms used to describe an operation or a part of the needle are traditional and vary in different plants, we hope that common terms can eventually be agreed upon and included in the Packaging Institute Glossary of Packaging Terms, Mr. Nack said. He added that the needle point is variously described as tip, bevel, distal end, cutting edge, regular point, flat point, flat ground, concave, spade type, side bevel, front bevel and closed bevel.

Federal Specification GG-N-196 provides for eight routine tests covering corrosion, stiffness, elasticity, resistance to breakage, security of swaging, diameter and depth, and fluid tightness. Some users perform tests for cleanliness, burrs and rubber piercing. There is general agreement that most of these tests should be performed, but a difference of opinion exists as to who should do the work—buyer or manufacturer.

Results of a questionnaire sent out by the Packaging Institute indicate that a model method of setting up specifications for a needle designed for a specific purpose would be to furnish the supplier with the following information: (1) injection length (inches); (2) length and type of bevel; (3) maximum O.D. of hub; (4) I.D. of hub (slip or thread, etc.); (5) tip requirement (rivcted or soldered); (6) cannula, gauge, wall and tubing specifications; (7) hub material and plating; (8) quantity; (9) price; (10) quality and (11) purpose or use.

Optimum Storage Conditions for Packaging Materials—A Report—R. H. Butler, *Merck & Co., Inc.*, Mr. Butler reported on a survey to determine the proper warehouse storage conditions—prior to packaging—for four types of packaging materials and to see if a common denominator existed which would satisfy all of the materials. His conclusions were as follows:

	Temperature range	*Humidity range*
Paper	65 to 80° F.	40 to 60% RH
Plastic films	65 to 75° F.	35 to 55% RH
Glass	65 to 80° F.	40 to 60% RH
Gelatin	Under 85° F.	40 to 55% RH

A common denominator does exist at 65 to 80 deg. F. and 40 to 60% RH which would be proper for the entire packaging-material warehouse area.

If these specifications cannot be met over the entire area, then a part of forward-stock area should be so provided for conditioning of packaging materials several days before assembly.

The recommended temperature and humidity ranges will insure preservation of maximum strength and performance of materials. If only a forward-stock area is so conditioned, it will help with assembly performance in packaging machinery, but will not correct loss of strength or distortion and deterioration resulting from long improper storage before being brought into the conditioned areas.

The recommended conditions, according to best knowledge and belief, are met by few drug and pharmaceutical houses at present. There should be a minimum turnover of four times per year, i.e., inventories should not exceed three-months' supply.

Heatless Sterilization of Packages—Dr. David M. Ashkenas, *American Home Products Corp.* The various methods of sterilization which do not employ protracted heat were described and discussed by Dr. Ashkenas. They included: (1) Tyndallization (fractional sterilization with intermittent heat); (2) chemical; (3) gaseous (carboxide, etc.); (4) electronic sterilization as exemplified by the capacitron, Van de Graff generator and high-voltage transformer and (5) ultraviolet.

The application of these methods to individual problems—partly based on the results of a questionnaire—were considered. For example, the method of Tyndallization has been extensively used, but its limitations must be understood, according to the speaker. The chemical, gaseous and ultraviolet methods have also had their specific applications. One of the most universal methods appears to be the gaseous, since by the use of ethylene oxide, or mixtures of ethylene oxide and carbon dioxide (carboxide), it is possible to sterilize plastic materials that would be destroyed by the usual protracted heat methods. Similar advantages are promised by the electronic methods which are now on the verge of commercial exploitation.

Some Unsolved Packaging Problems—R. J. Hennessy, *American Cyanamid Co.* Today's unsolved packaging problems call for complete cooperation between the user and the supplier, making full use of the latter's production, sales and research services, Mr. Hennessy said. Among the problems he cited were the need for a transparent film with all the economy and mechanical advantages of traditional materials, but offering more in the way of protection, especially for sampling drug products; an automatic machine, with a wide size range and ease of change-over, for molding and wrapping suppositories in one operation; an automatic tablet counter, capable of high speed to keep pace with the packaging line and of handling a variety of sizes and designs with a minimum of change-over time; improved labeling equipment to handle the larger-sized labels often used for export packages and to spot and apply wrap-around labels on containers of a variety of shapes and sizes.

PRODUCTION SEMINAR

Chairman, John A. Warren, *American Home Products Co.*

Machine Standards for Timing and Maintenance of Automatic Packaging Equipment—George M. Woodruff, *General*

Foods Corp. The most important factor in getting highly efficient operation out of automatic machinery, Mr. Woodruff said, is the precise control of adjustments and timing of the machine parts. Equally as important, since it allows settings and adjustments to vary, is the mechanical condition or lost motion in these parts. There are, of course, many other important factors required for high operating efficiencies: (1) competent, well-trained crews; (2) adjusters and mechanics who are alert and know their equipment; (3) packaging materials of good quality and ready availability and (4) the product itself in good, continuous supply and packable. The key, however, around which all these items can "team up" for high efficiencies is the condition of the machines themselves.

A convenient means for checking the timing and adjustment of machine parts is to install a 360-deg. graduated dial on a shaft revolving once for a complete cycle of the machine. As this shaft is turned by hand, carrying the dial with it, the exact timing relationship of all moving parts can be readily read from the dial as it rotates past a pointer. Using the dial as a tool, then a standard chart can be set down on paper as a guide for operators and adjusters. With a standard established, the machines may be audited periodically to insure that proper settings are maintained.

Standards on timing and adjustments alone on machines are not enough. It is equally important to set standards on the tolerable wear on machine parts since, as wear accumulates, lost motion permits variation in time or position, and control is thereby lost. With a standard established on tolerable wear for machine elements, it is possible to anticipate necessary replacements or repairs before they begin to affect operating efficiencies. By repairing individual parts as required, periodic overhauls can be eliminated and maintenance cost reduced.

The best method of developing these standards is to delegate a competent individual or staff to record the best settings which can be found for timing and adjustments, plus tolerances for accumulated wear, in chart form. When production trials have proved the accuracy of the standards, management should insist on their general use. Periodic audits will be required to insure compliance and to plan or schedule necessary repairs.

Close adherence to the use of machine standards can aid in maintaining operating efficiencies in the 95 to 98% range.

X-Ray Inspection of Fill Height of Sealed Containers for Overfill or Underfill at Speeds up to 900 a Minute—H. SCHREIBER, *General Electric Co.* One can easily visualize a system of X-raying every container passing down a conveyor, but with today's present production rates and accuracy requirements, the human eye could not resolve this image with sufficient accuracy or speed, Mr. Schreiber said. However, the introduction of a "sleepless" eye which could automatically check each can makes the addition of X-ray inspection routine on a packaging line practical.

The cadmium sulfide crystal as an X-ray detector has made it possible to "look" at each can automatically as it moves down a conveyor line and insure that the fill material is up to its proper level. The small size of the detector has made it possible to monitor for fill with accuracies of $\pm$ 1/64 or better and the over-all speed of the complete unit allows inspection of up to 900 containers per minute. It is therefore possible to speed up filling and packaging lines without danger of overtaxing inspection facilities or lowering of quality-control standards.

The principle of this new method is relatively simple, according to Mr. Schreiber. A small beam of X-ray when passed through a container at the correct level of fill will either pass through the container easily or be blocked, depending upon the height of material within the container. The tiny detector located on the opposite side of the container picks up these signals and interprets them for counting, rejecting, etc. By means of this basic system, it is possible to detect and reject either underfill containers or overfill containers and, with two detectors simultaneously, check for both over- and underfill.

This, then, places in the hands of the packager a new tool whereby it is possible to guarantee a 100% check of all containers, rejecting all low fills and warning of costly overfills. The equipment is easily added to existing conveyor equipment.

Despite the ease and accuracy with which this inspection can be made, it must not be confused as a weighing check. It is only capable of checking the actual height of the fill material, but inasmuch as the height is indicative of volume in some cases, this could be interpreted as weight. Actually, in most systems a fill-height inspection is satisfactory and in some cases where the amount of headspace must be accurately controlled for proper processing, there is no substitute for this type of inspection.

While this new unit is not the answer to all fill inspection with all materials and containers, it nevertheless does supply a solution for standard canning lines where higher speeds have made normal inspection techniques too cumbersome. Providing an accurate means of checking containers without requiring actual physical contact, this equipment offers a new approach to one packaging problem that has limited production for many years, that of monitoring fill at high rates of speed and guaranteeing 100% inspection of the finished product.

Checking for Loose Caps on High-Speed Production Lines—E. F. DIVAL, *Corn Products Refining Co.* Mr. Dival demonstrated a full-scale model of a loose-cap detector developed by his company and used on its bottling line. It is a 36-in. stainless steel device consisting primarily of a track along which the capped bottle passes and suspended above a rubber roller with a magnet at the exit end. As the bottle travels along the track, pressure from the roller is exerted on the cap so that if it is very loose it will fall off almost immediately, or if slightly loose will be drawn off by the magnet at the end of the roller. The device also can be adjusted to allow slightly loose caps to pass.

Automatic Checking of Correct Labeling on Lithographed-Can Filling Lines—M. J. REID, *Eastman Kodak Co.* This machine is designed to remove from a production line any can with an improper lithographed label. The lithographic plate for each can bears both the label and the code marks by means of which an electric circuit is closed to operate a solenoid to sort the cans. Improperly labeled cans, which of course have different code marks, are detoured from the production line by a closed gate onto a rejection table. The code marks lithographed on the side of the can are small bare areas, devoid of printing, through which an electric circuit can flow. Contact is made through wires along which the cans are rotated in the vertical position. The apparatus is provided with seven wires in contact with the rotating can. They can be set selectively to pass or reject cans having various arrangements of code marks.

The electrical detection unit of the label-checking device provides a means of translating impulses from the coded marks on the can into a signal that will operate the mechanism to accept or reject a can. The equipment will also reject all transient impulses. The detector in this unit is a group of seven horizontal wires connected so that two of them will serve to identify a particular can. The remaining five wires are connected together and serve two purposes. First, they provide a no-signal voltage when the solder joint is in contact with the wires to reset the mechanism. Second, if they pick up a signal from the code area, they operate the rejection mechanism.

Automatically Graphing and Computing Weight-Control Data—L. FOLWELL, *Scale Specialists & Systems, Inc.* A few of the reasons behind use of automatic equipment for weight control in check-weigh operations of packaged goods were presented by Mr. Folwell.

Package manufacturers are paying a tremendous sum in the cost of actual overweights. Average weights can be controlled to their minimum best with the use of an operator if those operators are given a useful help and an automatic tool with

which to do their jobs. It will also help to reduce check-weigh-operator's errors, will decrease overweights and increase quality control.

In the past, the usual report coming in written form to the boss's desk might be hundreds of figures to be studied, and the same hundreds of figures to be calculated to determine weight. An automatic calculator can do all this except for one single subtraction and one single division. Within a minute after your production line is shut down for the day, you can know the average weight of production for that day. You can see the fluctuations in a graphic presentation which reports actual individual weights.

An automatic device graphically displays each individual weight and concurrently calculates group averages. At the same time it displays the group range on a strip chart and, through the use of electric counters, the machine calculates over- and under-weight values and the numbers of samples tested. All this gives the package manufacturer a tool to force as perfect a weight-control picture as is possible from any package filler.

Experience has proved it is possible to control two filling machines with one instrument. Individual samples can be weighed either for net or gross. The type or style of check scale now being used can be attached. Should present scale graduations be readable in milligram, 1/100 oz., ⅛ oz., ¼ oz. or in grains or grams, the chart graduations of the instrument will be equal to those on the scale.

PACKAGING AS A PROFESSION

Chairman, JAMES W. GOFF, *Michigan State College.*

C. K. ROYCE, *Clint Royce Associates.* Packaging is big business, Mr. Royce said. It represents about 10 billions of dollars of our national economy. It consumes as large a proportion of our raw materials as any other field. Economists rate it our ninth largest industry. But I don't think packaging is an industry—it embraces many industries.

What are we doing to train people to take over the operation, the direction and the future of this industrial giant? Precious little, it seems to me.

It's high time we started training people systematically to be packaging engineers. It's time we fixed it so that these people with packaging responsibilities in American industry no longer have to depend upon their packaging-material sources and salesmen for their education.

I'm very much impressed with the start which Michigan State College has made in the field of technical packaging training. That great school is now offering a four-year course in Packaging Technology which carries with it a BS degree. Purdue University is inaugurating a series of four-week short courses for packaging personnel. Columbia University and New York University are offering extension courses in packaging. The University of North Carolina and the American University in Washington, D. C., both held packaging symposiums early this year.

We of the Packaging Institute must support to the fullest these educational programs.

CARL A. CLAUS, *J. L. Ferguson Co.* Packaging, as a profession, has the incomparable advantage of representing almost a common denominator for a tremendous segment of industry. With few exceptions, almost every product one can bring to mind is involved with either a minor or a major packaging interest. Packaging, considered individually, ranks among the industrial giants.

In many industries the package represents more of the cost of the items sold than the products contained. From a survey made involving 117 different packaged products, packaging represented over 80% of the total number of direct labor-hours involved in producing product and package.

In the past, as management came to recognize packaging as an important part of its structure, it often overlooked the personnel and selected a likely looking candidate and placed him in that job. When it became necessary to promote this individual, he would be taken out of packaging and someone else would assume the task of handling packaging problems for that company. Against this attitude towards professional packaging men, I wish to warn top management.

A good packaging engineer is needed in any company that has even a small variety of sizes, shapes and types of packages. He must know materials and machines. He needs to be a creative artist and have good sales sense. For professional men there is a real need in industry and a great opportunity.

An individual who has taken the necessary course in packaging would fit himself for many different phases of the work involved. Actually he would be prepared for: (1) Selling packaging materials. (2) Manufacturing packaging materials. (3) Entering the research field in packaging material at the producer's plant. (4) Developing packaging machines. (5) Selling packaging machines. (6) Manufacturing packaging machines. (7) Purchasing packaging materials in a user's plant. (8) Developing packages for a package user. (9) Entering production work in the package-user's plant.

What recognition in the corporate structure does management intend to give to the professional packaging man? Is the company's packaging to be made a division of the Engineering Department? A part or subdivision of Advertising? Is it to be a subdivision of or subordinate to another activity, or is it to stand on its own? Packaging can be and in many industries actually is of such a major consideration to the profit picture that it should form a distinct division of top management.

FRED NOSSAL, *Ferdinand Gutman & Co.* Mr. Nossal examined the economic basis on which a college student might adopt packaging as a profession. While there are relatively few firms in the country engaging one or more full-time employees for packaging work exclusively, there are thousands of firms that have delegated packaging work to an employee who is also doing some other work. A formal training in the art of packaging would certainly open desirable fields of employment.

The suggestion was made that, in the various curricula given in packaging technology, there should be included courses in export packaging, package-testing techniques, as well as a course to acquaint a packaging technologist with the basic mechanical and chemical knowledge required for his job.

CHARLES W. STEPHENS, *Dominion Paper Box Co., Ltd.* Mr. Stephens discussed affirmatively: (1) Is packaging a profession? (2) Should institutions of higher learning attempt to train people in packaging? (3) If so, of what should this training consist?

In the speaker's concept of a technical education and its value in cutting down the time required to gain experience by long years of actual trial and error in the factory or the lab or with the sales department, it is obvious that a student must concentrate on some aspect of packaging. For packaging is such a wide field that it is most difficult for one individual to acquire complete knowledge on all of these.

The course offered by Michigan State College on Packaging Technology was briefly referred to and it was recommended that a committee in each of the basic industries interested in packaging be set up to assist in the development of a course that would meet their particular requirements. Thus, as students take their training in a specific field, they should be quickly absorbed into these industries as men with outstanding experience and knowledge of a technical nature. Presumably they would advance rapidly into positions of responsibility.

DR. F. A. COLLATZ, *General Mills, Inc.* The training of an individual in packaging work is one of gradual development. Starting with personnel having a fundamental training in chemistry, physics, math and related subjects, we have preferred to train our own packaging men.

Our packaging work has been confined largely to flour, cereals and cereal products and is, therefore, very much spe-

cialized. Trainees are started in the laboratory evaluating various packaging materials for chemical and physical properties. Products packaged with these materials are submitted to storage tests under a variety of temperature and humidity conditions and checked for condition at regular time intervals. This enables the individual to get a thorough understanding of our products and their packaging requirements.

A training in packaging could be a stepping stone to other activities, depending upon the talents of the individual, such as production management, packaging research, products control, procurement, sales or sales service.

Our training program has been satisfactory to date and our future need for trained packaging experts is open to question.

MECHANICAL GOODS PACKAGING

Chairman, CARMON M. ELLIOTT, *packaging engineer, Eastman Kodak Co.*

Technical Aspects of Export Packaging—J. E. WILLIAMSON, *product service, International General Electric Co.* Although the principles involved in domestic packing may be applied to export shipping in many cases, there are some basic differences such as: greater distances, handling during transit, methods and types of transportation, warehouse facilities at various ports and terminals, and extremely varied climatic conditions. These differences usually add up to greater care, more detailed planning and higher cost in packing for export.

Export packing should be designed to occupy as little cubic space as possible to reduce transportation and landing costs. Every package should be critically reviewed to determine whether the packaging is not only adequate, but possibly overadequate. The importance of good, clear, large stencil markings for export shipment cannot be overemphasized. Incorrect labels can result in fines, extra labor charges, mishandling and even loss of material.

A satisfactory package is one which offers adequate protection to the enclosed product against the rigors of transportation, handling, temperature, humidity, etc.; is designed with a careful view of initial cost and expense in shipping and storing, and is properly labeled. Security cannot be sacrificed to economy. An export carton is cheaper than a wooden crate, but obviously cannot be used to ship heavy machinery. It is often cheaper to pay a little more for the package and thereby eliminate claims for damage, higher insurance premiums and loss of good will.

To the customer abroad, "The product is only as good as the container it is shipped in." General Electric has learned from experience that success in export shipping depends largely on the adequacy of export packing.

Engineered Packages Pay Off—M. W. BARNELL, *assistant chief inspector, National Cash Register Co.* It is the practice at National Cash Register Co. to pack registers and accounting machines in cartons when size and weights limits permit, Mr. Barnell stated. For the type of register used in self-service food stores, the use of cartons in comparison with the former nailed wood boxes has resulted in savings in packing labor and material of $1.45 per register. The reduction in shipping weight of 34 lbs. has resulted in a further average saving in transportation costs of 66 cents per register. Damage claims average less than ½ of 1% of dollar value.

Due to a combination of high packing and transportation costs and excessive damage complaints, the method of packing one type of accounting machine was changed to utilize bonded-rubber shock mounts and wirebound boxes.

The container cost was reduced from $59.58 to $38.36 for a saving of $21.22. The reduction in shipping weight amounted to 133 lbs., which resulted in an average saving in transportation costs of $3.30 for each shipment. Complaints of damage in both domestic and overseas shipments have disappeared.

In the packaging of spare parts, repair parts and subassemblies, many special containers have been developed to accommodate the odd shapes and sizes frequently encountered. Porous rubber products must be packaged so that the rubber is not in contact with the packaging material.

Rust inhibitors are used for many kinds of parts. VPI paper is used to wrap subassemblies which are particularly vulnerable to rust. Experiments are under way using the VPI powder for parts enclosed in reasonably tight cartons, bags or envelopes.

Gaining Customer Good Will Through Packaging—MR. ELLIOTT. Packaging must be looked upon as an extension of the quality, already built into a product, to the customer. Packaging has a tremendous opportunity to gain customer good will.

Foremost of the packaging engineer's tools are the testing department, the quality-control department and the sales and advertising department.

Testing is a *must* for equipment (office machines, cameras, electric appliances, etc.) makers. To risk shipment without exhaustive shipping tests is folly. The most experienced of packaging men cannot forecast the extent to which a product is damage free. To underpack is serious, but to overpack is even more serious.

It is only through testing that the packaging engineer can determine the effectiveness of proposed materials and new materials. The search for the most economical material must never end.

All packaging supplies should be immediately challenged upon receipt for conformance to specifications. All packaging operations should be inspected by policing or statistical control.

The packaging engineer must look to the sales and advertising departments for guidance in the creation of a customer-satisfying package. Avoid package-prompted customer irritation by the employment and enforcement of a planned testing program, vigilance with quality and guidance from salesmen.

RESEARCH AND DEVELOPMENT

Chairman, CHARLES M. WOODCOCK, *General Foods Corp.*

The N.B.C. Scoreline Tester—EDWARD J. MONAHAN, *National Biscuit Co.* The high speeds of up-to-date packaging machinery have demanded more and more specifications—with less tolerances—on the packaging materials. One of the characteristics of folded cartons or flat blanks that influence machine efficiency is the quality of the scoreline.

The performance of the scoreline is seen after the carton is formed and momentarily released while it is moving from one station to another within the one machine or when it is fed into another machine along the production line. A poorly scored carton will spring out of position and result in a jam-up, shrinkage and downtime.

The spring-back of the carton to return to its original position is due to the resistance of the fibres within the scored area to remaining in the new position. This resistance offered by the fibres, regardless of cause, is equivalent to the force necessary to bring the scored specimen back to 90 deg.

Nabisco is currently experimenting with an instrument of its own development that will measure the force required to hold the formed scores at rectangles. A section of the carton containing one of the flat scores is folded at the scoreline to 90 deg. and then released. The force required to bring the specimen back to 90 deg. is measured. The instrument is calibrated in gram-centimeters.

The instrument has been used experimentally to demonstrate the loss in quality of the scorelines during a particular run on a certain converting press as well as the comparison of presses and types of make-ready and also the effectiveness of the score with different types of board stock.

New Thinking in the Selection of Packaging Adhesives—DR. F. C. CAMPINS, *Polymer Industries, Inc.* Packaging adhesives at all levels include those used for multi-ply web production, container forming, closure and labeling. They perpetually face the demand for higher rates of production, while

bonding tougher surfaces and giving increased dependability of performance.

The trend to faster and more "permanent" bonding often forces changes that virtually eliminate adhesives that have diluents or solvents normally needed for spread.

The adhesion techniques open to "instantaneous bonding" involve one or more of the following: (a) rapid temperature change, (b) pre-applied glue films and/or (c) pre-formed glue films.

The pre-applied group represents the zone of greatest progress and includes three major types of glue films: (a) those reactivatable by heat or solvent, (b) permanently tacky or (c) self sealing.

Increased dependability of machine performance becomes even more important as production rates increase. Selection of the adhesive must focus on the worst case and not on the average to give the requisite factor of safety in production.

Dependability in field performance is greatly favored by using adhesives that are substantially unaffected by any storage abuse. Selections fall into the resin group.

The tougher films call for new techniques, but of significance is the effort made to supply an adherable face by pre-processing.

Comparison of Characteristics of Organic Solvent Coatings for Protective Applications—PAUL WOLPER, *Riegel Paper Corp.* Mr. Wolper discussed the comparative qualities of films and coated papers, and pointed out that in either category the packaging engineer can find the two principal qualities he seeks: (1) protection against moisture and (2) heat sealability. The choice, he concluded, comes down to a matter of getting a combination of all the desired properties, in addition to the two basic ones, at the lowest cost.

There is no better moisture barrier, he pointed out, than paraffin wax, but unmodified wax coatings are poor in scuff resistance, which has led to many additives and modifications. Polyethylene is now widely used with wax. The resinous hot melts are not extensively used because of the high temperatures required for their application. The largest of all lacquer coatings is still nitrocellulose, plus some other cellulose derivatives, used for special purposes. The vinyls, he said, score low on moistureproofness in comparison with nitrocellulose.

Mr. Wolper presented a table comparing weights, heat-seal range and WVTR of seven film materials with eight variously coated sulfite, glassine and kraft materials. The table disclosed that coated papers in the flat can match the low WVTR rates of the best films; however, when creased the WVTR of the papers generally goes up considerably, in contrast to the films which generally are not much affected by creasing. Coatings most resistant to WVTR when creased are polyethylene and rubber.

NEW TECHNIQUES FOR THE PACKAGING ENGINEER

Chairman, C. M. ELLIOTT, *Eastman Kodak Co.*

Maintaining Proper Packaging Specifications—CLEMENS KOEHLER, *Koehler, Odell & Worden.* A definite need exists in the packaging field for the application of engineering principles in compiling complete and adequate specifications, Mr. Koehler said. Facts reveal that less than half of all specifications submitted to suppliers are complete enough in essential detail to allow for correct bids on a uniform basis! Many suppliers report that only 10 to 15% of requests for bids are accompanied by adequate specifications.

A good specification is supposed to describe in detail, as clearly and simply as possible, exactly what the supplier is supposed to deliver. If necessary, drawings, layouts, etc., should be a part of the specification to furnish the complete details. The extent and clarity of the explanatory detail for each element involved spells out success or failure of the specification.

The cost of maintaining a complete set of records and specifications is usually more than offset by the convenience and time saving realized through their efficient use, as well as economies to be derived through more uniform prices quoted by suppliers, as a result of adequate and proper specifications submitted with the request for bid.

Quality Control Enters the Packaging Department—A. F. DEUBLE, *Baby Products Plant, Johnson & Johnson, Crawford, N. J.* Quality control as a function in the packaging plant, Mr. Deuble said, can and should serve a two-fold purpose in the manufacturing process:

1. Assist in the obtaining of high quality packaging raw materials and the maintaining of that quality level necessary for a good packaging operation.

2. Audit the finished production to give assurance that the manufacturing unit is producing at a level within the pre-established range necessary to insure complete customer satisfaction.

There is always the possibility that the mention of quality control, or its application, may strike terror in the hearts of certain suppliers, but when a supplier is made aware of its purpose and objectives, such fears should be put to rest in short order.

The following examples serve to illustrate the benefits to vendor and user of working together.

When initially adopted, a collapsible tube gave a satisfactory crimp, but later it became unsatisfactory and appeared to be due either to stiffness of the metal or its thickness. Our waste was high. The vendor recommended certain changes in our crimping jaws. This helped a little, but was not the answer. Softer annealing also proved fruitless. When later we were able to show on control charts that certain lots of tubes showed improved crimping and lower waste when the metal thickness was controlled within narrower limits than previously, the vendor agreed to run the tubes within the narrower range. Recently, however, certain changes in our crimping jaws developed by our own mechanical group have allowed us to widen the tolerances of metal thickness and the vendor, being informed of that fact, is now manufacturing at that level.

In another case, variation in bottle width resulted in jams in a gang-filling operation: the filling stems failed to enter the bottles at any given setting. By a statistical study of the width of the bottles, from several lots which we rated for performance, we were able to set limits within which the bottles could vary and still be handled satisfactorily in the filler. The vendor was then asked as to his ability to produce bottles within limits we considered as necessary for our operation. He did it by truing up the bottle molds prior to each run of our bottles and by instituting control charts to check this particular dimension, also by keeping separate each production run. Our gang-filling operations are now greatly improved.

Packaging Faces the Incentive System—S. T. STEARNS. *manager of industrial engineering, Merck & Co., Inc.* Properly used, wage incentives are beneficial. They benefit the employer through lower costs, the worker through higher wages, and the consumer through increased purchasing power, Mr. Stearns said.

The financial incentive is not only a powerful motivator but, because the worker's job which is now well defined, bears a time standard which is used as a basis of payment, the worker is more aware of his job and his pay, and hence is more sensitive to any changes or conditions which affect it.

If the incentive plan is based on unsound policies or practices, is not maintained in a healthy state, or is operated in an unfavorable climate, or is applied to jobs for which it is not adapted, the resulting difficulties may well cancel out many of the benefits afforded by the plan.

The first line supervisor is a dominant factor in the success of the wage incentive plan. Apathy or an overdependence on incentives is fatal. The supervisor must be given support, delegated the necessary authority and taught how to make effective use of staff groups to discharge his responsibility.

Another Family

of Prestige Products

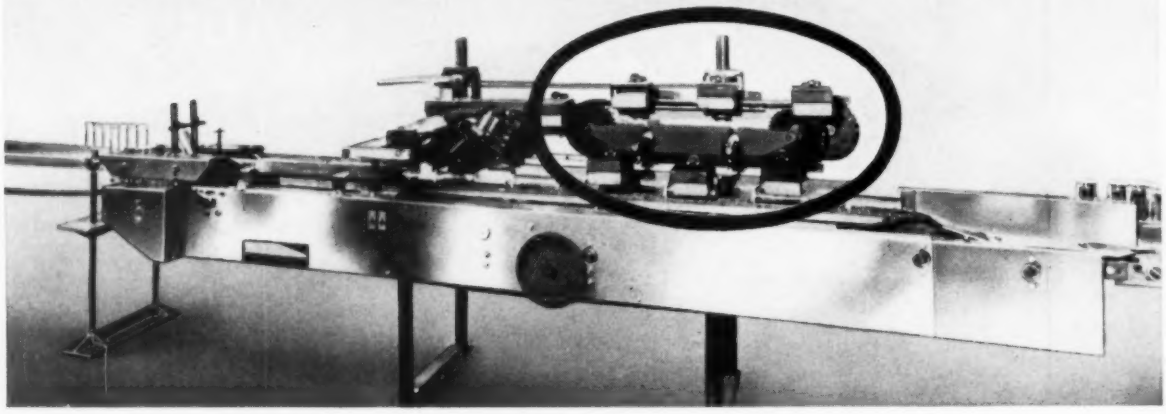
Packaged by **BURT**



F. N. Burt Company Inc. • Manufacturers of Small Set-up Boxes, Folding Cartons and Transparent Containers • 500-540 Seneca Street, Buffalo 4, New York • Offices in Principal Cities Or Write Direct • Canadian Division: Dominion Paper Box Co. Ltd., 469-483 King St. W., Toronto, Canada

Packages for Elmo, Inc., Philadelphia, Pa.

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A big advance in LABELING!

You took great pains to obtain colorful, attractive labels, for you realize how much they mean to SALES. And now you can be sure that your labels will always look their best—be uniformly smooth, free from unsightly wrinkles, firmly sealed!

The new THRIFTY LABELER gives you this important sales advantage because it applies the label by a radically improved method. The label is not merely tapped on—its entire surface is subjected to continuous flexible pressure. Leaves the machine so tightly sealed that it will withstand the hardest handling. Glue failures are a thing of the past. The containers may be hot or cold, wet or dry. Labels may be rectangular, round or fancy cut; surfaces of containers odd shaped or recessed.

SPEED—40 to 120 a minute...SIZE RANGE—from a gallon jug to a 4-ounce bottle...QUICKLY ADJUSTABLE with few change parts.

LOW COST

Low initial cost, low maintenance and high operating efficiency make the Thrifty Labeler a sure way to better profits—whether you are labeling by hand or machine.



Labels a wide variety of containers. Surfaces may be odd shaped or recessed.

THE NEW Thrifty Labeler

Write for full particulars

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DALLAS DENVER LOS ANGELES SAN FRANCISCO SEATTLE TORONTO MEXICO, D.F.

Silicones in packaging

Their unique *ab*hesiveness has opened up numerous applications where stickiness is a problem.

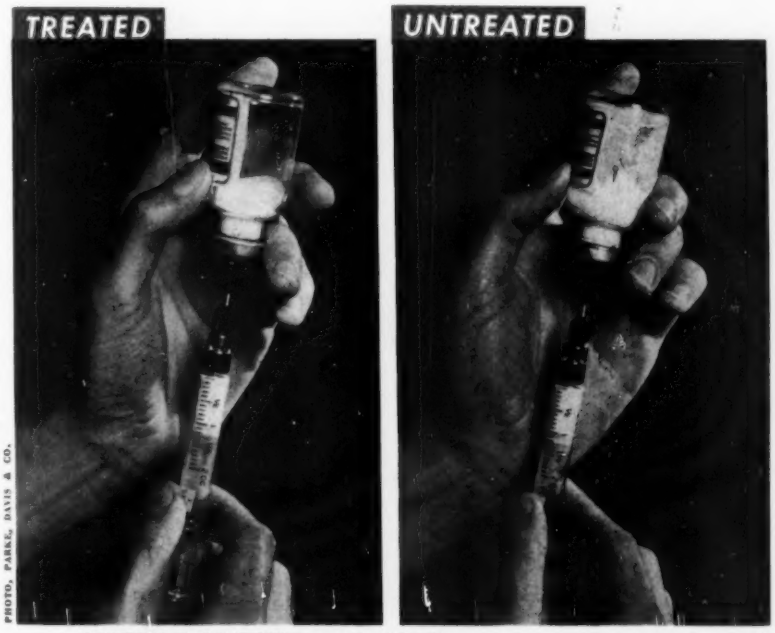
By D. M. FRANCISCO*

Preventing sticky materials from sticking to themselves or their containers has always been a problem in packaging. Literally thousands of treatments have been developed in the search for a low-cost, non-contaminating interface which would be easy to apply and which would retain its effectiveness despite aging, heat and moisture. Not until the introduction of the silicones, however, was a material developed which showed promise of meeting all of these requirements.

The original development work on silicones was done in the late '30s when the Corning Glass Works instituted a search for a heat-resistant electrical insulating varnish for glass-fibre tape. The Dow Chemical Co. worked with Corning on the pilot-plant production of these materials and on basic research into silicone fluids, compounds and rubbers. In 1943 the two companies established a third, the Dow Corning Corp., to carry on full-scale development and production of all silicones and silicone products. Dow Corning was first to produce silicones commercially and has pioneered most of their industrial uses.

Although the initial production went entirely to military uses, an industrial peacetime market was built up rapidly after the war. In 1947 the Chemical Department of the General Electric Co. also began producing a selection of silicone products. Just recently the Linde Air Products Co., a division of Union Carbide & Carbon Corp., has announced its intention to be an important factor in silicone production.

The most distinctive feature of the silicones, chemically, is their molecular backbone: A chain of alternating silicon and oxygen atoms. Half again as strong as the usual carbon-to-carbon chain found in most materials, this unconventional structure accounts for some unconventional properties. Although these properties vary among different members of the family, all silicones are relatively unaffected by



INTERIOR COATING of vial with silicone release agent permits nearly all the contents to be withdrawn; in contrast, note how penicillin suspension clings to sides of untreated vial at right. The treatment is now widely used in the pharmaceutical industry for antibiotics and reduces necessity of overfill from as much as 50% to as little as 8% on 1-cc. vials.

* Manager, Release Materials Sales, Dow Corning Corp., Midland, Mich.



PHOTO, E. R. SQUIBB & SONS.

THREE-POSITION PHOTO of treated and untreated vials of procain penicillin shows how silicone treatment (right, below) keeps them clean, free of cloudiness, improved in appearance.

high or low temperatures and are highly water repellent. They have good dielectric properties, a high order of resistance to oxidation, weathering and a variety of chemicals, and are for the most part incompatible with most organic materials.

These properties are so pronounced that only trace quantities, easily applied by dip, brush or spray, are required for effective treatment on almost any solid surface.

In most cases the texture, "feel" and appearance of the surface remains unchanged. But the degree of non-reactivity, or non-sticking, which the silicone imparts is so striking that the Dow Corning Corp. has coined the word "*ab*hesive" to describe it accurately.

"*Ab*hesive" was first used in connection with Dow Corning 1107, a liquid silicone product especially designed for paper treatment. Although it was originally used only on kraft, several suppliers are now offering it on one or both sides of a wide variety of paper, paperboard, parchment and even glassine stocks. Applied by dip or roller coating from either a solvent solution or a water emulsion, the treatment requires only a 3-to-5-min. cure at 300 deg. F. to develop optimum properties. The addition of a catalyst can reduce the curing schedule to 30 to 60 seconds at 250 deg. F.

No special storage requirements are necessary for silicone-treated stock. Close observation has revealed that the full efficiency of the treatment is retained after more than two years.

Silicone treatment does not prevent the transmission of water vapor. However, its degree of water repellency is so high that initial wetting is prevented and the subsequent rate of wetting is greatly retarded.

As a result, treated paper retains its tensile strength and tear resistance for relatively long periods of time in contact with water. Treatment also helps control the penetration of subsequently applied water-soluble coatings. The sensitivity of these coatings to water is minimized and paper curl is substantially reduced.

Baking applications

An especially useful feature in connection with products which must be cured, dried or baked is the fact that silicone treatment is unaffected by temperatures well above the decomposition point of the paper itself. This feature, plus the fact that the treatment is non-toxic, has given rise to several successful applications for treated stock in food packaging, especially in the baking industry.

Sheets of silicone-treated parchment, for instance, have proved to be highly effective aids in baking and packaging sweet goods. Greaseproof, ovenproof and non-sticking, they eliminate pan greasing and washing in the bakery and expensive carry-home cartons in the store.

The treated sheets are simply placed in dry, ungreased pans. Sweet goods are placed on them and baked as they would be in conventionally greased pans. After baking, the sweet goods are removed, liner and all, leaving the pan ready for immediate reuse. The sweet goods remain on the liner throughout decorating and packaging, acting as a non-absorbent inner bottom for inexpensive paperboard containers.

If the sweet goods are sold in bulk over the counter, the treated sheets may be re-used as pan liners. Complete packages are given extra sales appeal by the fact that even if the rolls and liner are reheated in a warming oven before serving, the sweet goods still do not stick to the treated parchment.

Several types of Brown 'n Serve

PHOTO, KALAMAZOO VEGETABLE PARCHMENT CO.



NON-STICK PAN LINER for sweet rolls carries through to the package, permits housewife easily to remove "sticky buns," even if rolls are reheated in the package. Heat doesn't affect silicones.

rolls are being pre-baked and sold in paperboard cartons which are silicone treated throughout. During preliminary testing, comparable organic treatments stuck severely after only brief exposure to oven temperatures.

Slip sheets

In the rubber industry, silicone-treated kraft is fulfilling a long-felt need for a non-reactive slip sheet between slabs of raw stock during shipping and handling. Talc and mica dust, the best materials previously used, frequently affected the green rubber and they both made handling areas white with thick, heavy dust.

Treated interleaving paper does not react with the rubber and will not stick even when passed through a unit vulcanizer. Cost of the treated sheets is so low that several fabricators discard them after only one usage, thereby assuring constantly clean, uniform release.

Silicone-treated paper is also receiving considerable attention as a core wrapper and backing strip for pressure-sensitive tapes. Cost is far less than that of polyethylene, the only comparable material. One producer of treated glassine demonstrated its effectiveness by holding a sample against tape under an 8-lb. weight for over a month. The sample did not stick, nor did the tape suffer any loss of tack.

Miscellaneous applications for silicone-treated paper as an interleaving material range from separating polyethylene sheet during printing to wrapping uncured resinous electrical-insulating components. One manufacturer found that treated wrapping paper readily freed both microcystalline wax and camelback even when test shipments were subjected to as much as 100 lbs. per sq. in.

In a recently developed and highly unconventional application, silicones have eliminated interleaving paper entirely. Even when carefully wrapped, the moisture in the very wrapping itself can cause flat glass to "etch," discolor and become unfit for use in as little as three months of storage time. A leading manufacturer of sheet glass has found that a molecular film of silicone on the glass itself is a more efficient protector than any separating sheet.

Silicone treatment effectively prevents discoloration. It also renders the glass more resistant to abrasion. Treated glass stays clean longer and has less tendency to spot or streak after a rain. The manufacturer estimates that over $100,000 a year is being saved in paper costs alone. His storage space is increased and a potential fire hazard is eliminated. And his "wrapping" crew has been reduced from 18 men to four.



TREATED WRAPPER won't stick to tacky tape. Previously, nothing short of a metal container or plastic box would serve as a package.



WATER SHEDDING by treating wrapping paper is illustrated by this photo of two parcel-post packages which have been left out in the rain. Paper on package below is untreated.

Coating of glass containers

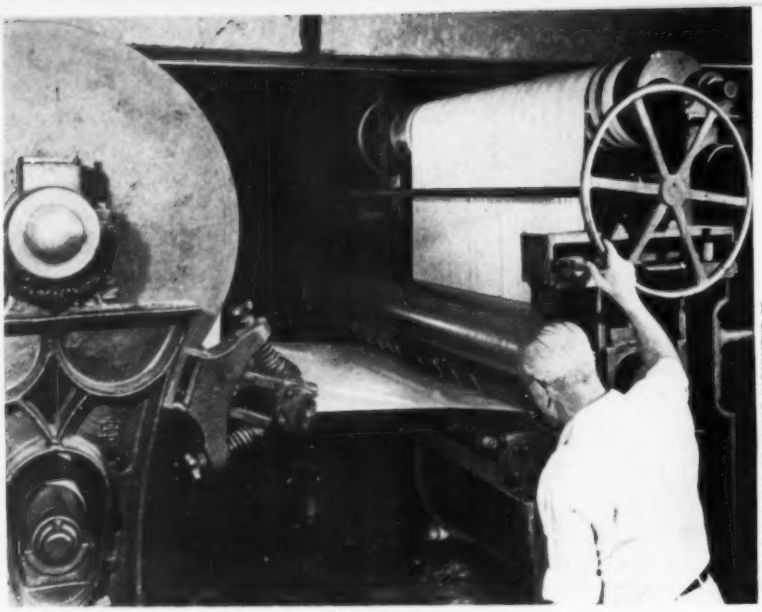
A somewhat-related silicone treatment is that of an interior coating for glass bottles and vials, although for a different reason. The water repellency imparted by the coating effects a high degree of free drainage. The treatment is especially useful on vials for penicillin, streptomycin and other high-cost antibiotics. In order to assure the ultimate, accurate delivery of 1 cc. of penicillin suspension, for instance, vials used to be loaded with from 1.3 to 1.5 cc. Silicone treatment, however, assures 1-cc. delivery from a vial loaded with as little as 1.08 cc. In most cases the product savings more than make up for the cost of the treatment.

Treatment is being applied by some pharmaceutical houses to as many as 100,000 vials per day. The current total for the industry is estimated at over 150 million vials annually.

Silicone treatment is relatively easy to apply to vials and bottles. The fluid is dispersed to a concentration ranging from 0.1 to 2% in some suitable solvent such as chloroform or carbon tetrachloride. Prepared emulsions of silicone fluid may also be used, simply by diluting them to similar concentrations in water. In either case, the vials are treated immediately after being washed, rinsed and dried. Some users spray the solution into the vials, while others immerse baskets of vials into the solution itself. After draining and drying, vials are baked for periods ranging from 45 min. at 300 deg. C. to 3 hrs. at 250 deg. C. Baking, of course, also serves to sterilize the vials, leaving them ready for use. The non-wetting effect could be obtained without baking, but it would not be evident over so long a period.

As far as anybody has been able to determine, the silicone treatment has no effect on either oil or aqueous suspensions of penicillin. Some observers, however, have noted a slight lessening of effectiveness of the drain-free treatment on vials after several months' storage. Others report that the treatment is more effective in connection with the larger (50 micron) particle-size suspensions than it is with those in the 4-micron range.

Silicone treatments have also been found effective on full-sized bottles. Catsup, for instance, pours much easier and does not tend to adhere so much to the exterior of a silicone-treated bottle. As an exterior treatment alone, it is becoming especially popular for lips and pouring spouts on containers for various liquids with poor pouring characteristics. Like a



PHOTO, KALAMAZOO VEGETABLE PARCHMENT CO.

IN CONVERTING PLANT, silicone treatment may easily be given one or both sides of a wide variety of papers in conventional equipment.

trace of butter wiped on a teapot spout, the non-wetting silicone coating effectively reduces the tendency of liquids to run down the outside of the container.

A slightly different approach to glassware treatment is found in General Electric's Dri-Film SC 87. This is a clear silicone fluid containing some unhydrolyzed methyl chlorosilanes. Like straight silicone fluid, this material may be applied as received and polished dry, or it may be diluted to 5 or 10% in solvent for dip or spray application. Air drying is usually all that is necessary, but a short bake of 15 to 30 min. at 100 deg. C. tends to improve water repellency.

Dri-Film SC 87 is specifically recommended for glass tubing and apparatus to promote cleanliness, and for glass, ceramic and plastic electronic parts to minimize surface conductivity. Because the material hydrolyzes during application to produce a small amount of hydrochloric acid, care should be taken to avoid its contact with the hands and skin, as well as with metal parts which may be subject to corrosion.

Applications to rubber

Several drug houses are utilizing silicone treatment to prevent rubber stoppers from sticking to each other after mass sterilization. Untreated stoppers frequently bond so tightly they must be literally torn apart. Waste losses often run quite high. A sprayed-on 5% solution of silicone fluid, however, has prevented bonding even after stoppers have been washed and exposed to live steam for as long as 4 hrs.

Stoppers molded of silicone rubber itself are finding an increasingly wider range of uses, particularly in bottling some of the more reactive chemical reagents. Although similar in appearance to conventional rubbers, silicone rubber retains its resilience, as well as its characteristic nonreactivity, during and after exposure to temperatures ranging from minus 100 deg. to over 500 deg. F.

These properties have helped solve several unusual packaging problems. Gaskets molded of Silastic, the Dow Corning silicone rubber, for example, provide a tight seal on suture containers after exposure to alcohol and sterilization temperatures in the range of 250 deg. F.

Another unusual packaging application arose when an aircraft-equipment manufacturer sought to protect his new gyro-mechanism from corrosion by sealing it within a completely inert and dehydrated atmosphere. Despite the utmost precautions, solder and flux fumes often penetrated the cover joint during the sealing operation, contaminating the delicate mechanism within the housing. Even when it was successfully sealed, the case was impossible to re-open without ruining the expensive cover and electric harness.

Both of these drawbacks were eliminated with a thin Silastic O-ring. Fitted snugly under the cover flange, it excludes the corrosive fumes which are generated when a metal strip is soldered over the entire joint. The Silastic is not damaged by soldering temperatures and the gyro-mechanism case is as easy to re-open as a vacuum-packed coffee can.

Equipment release agents

Several silicone products are also widely used in the packaging process itself. Perhaps the best known to date is Slipicone, a Dow Corning compound which is widely employed as a lubricant for the pads, base plates and rolls of heat-sealing machinery.

A translucent compound with about the consistency of petrolatum jelly, Slipicone retains its consistency after long exposure to temperatures as high as 400 deg. F. It will not break down to form a carbonaceous deposit at any temperature. By preventing waxed paper, cellophane or plastic film from sticking to or building up on heated surfaces, it aids in high production standards and cleanliness.

Several operators of cushion-type machines are utilizing silicones by replacing or recovering their present pads with Silastic-coated glass cloth. Non-adhesive and fully resilient even after prolonged operation, such pads greatly increase the service life and efficiency of the equipment.

Slipicone is also being used in a large number of related applications in packaging. A thin coating prevents lacquer build-up on the dies used to punch can lids from pre-lacquered sheet stock. It also serves as a lubricant on the forming pins for gelatin capsules and it prevents label adhesives from sticking to labeling machines. One adhesive manufacturer, in fact, recommends applying Slipicone to glue pots and all areas that might be smeared with glue to reduce cleaning time and costs.

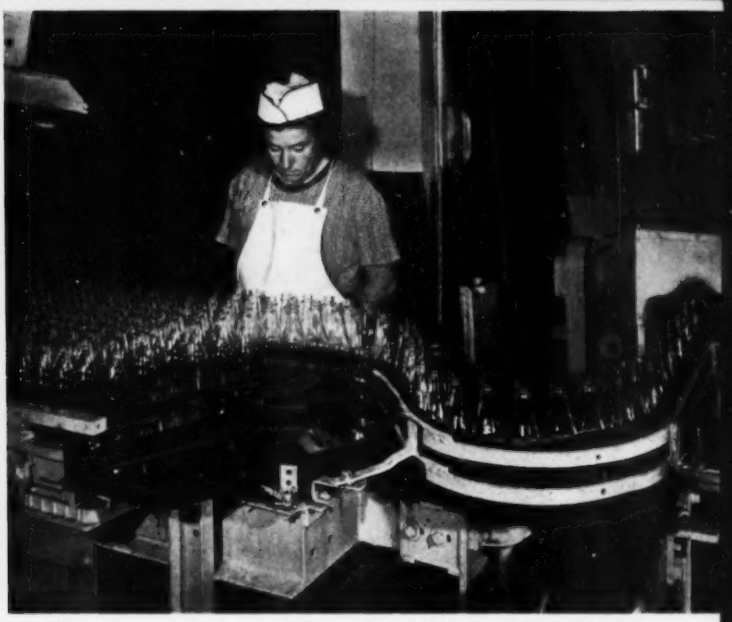
Several bottlers have found that a thin Slipicone film enables them to use a damp cloth instead of a scrub brush to clean bottle-filling machines and related equipment where spillage is inevitable. At least one bottler has reported that a coating of Slipicone on unscramblers and metal carrying belts prevents jams and sticking. Bottle breakage is reduced.

For *ad*hesiveness

In direct contrast to these treatments which, one way or another, involve easy release, or *ab*hesiveness,



PHOTOS, E. B. MILLER & CO.



IN PACKAGING PLANT, silicone compounds have wide application to equipment as release agents. Here a light coating is being applied to outside of stainless steel catsup-bottle filling tank, to prevent boiling-hot catsup from sticking to it. One application lasts an entire season, cuts daily clean-up time from 1 hr. per tank to 5 min. On bottling line (right), a light coating on the unscrambler disk and metal conveyor chain helps to prevent jams and reduce breakage.

at extreme temperatures, is a series of new compounds under development at Dow Corning which are notable for *ad*hesiveness, or the tenacity with which they stick to a wide variety of surfaces, including polyethylene, tetrafluorethylene and even silicone-varnished glass cloth and silicone rubber.

Most outstanding to date is a material known as Dow Corning XC-271. This new silicone product has an adhesive strength that compares favorably with that of conventional pressure-sensitive adhesives at room temperature. It is unique among such adhesives in its retention of high adhesive strength at temperatures ranging from minus 55 to over 300 deg. F. It tends to soften at temperatures above 300 deg. F., but still retains good pressure sensitivity and adhesion after long exposure to temperatures up to 400 deg. F.

These properties suggest the use of XC-271 on glass cloth and tape for high-temperature electric and electronic applications, and on low-temperature, weather-resistant wrapping and sealing tapes. Still under test and evaluation in Dow Corning laboratories and by leading tape manufacturers, pressure-sensitive silicone tapes are just becoming available to industry as a commercial product.

De-foaming agents

Another characteristic of the silicones which is proving useful in packaging processes is their extraordinary ability to prevent or inhibit the formation of foam. Only trace quantities of Dow Corning Antifoam A, for instance, are required to inhibit many of even the most violent and persistent foamers.

The effectiveness of this product was demonstrated recently when a wine-bottling plant installed a new high-speed filler, only to have the unit cause so much excess foaming that its production had to be reduced to less than the plant's former rate. Even then, foam was deposited on the machine's rubber seals, causing them occasionally to adhere to a bottle, snatch it up and drop it on the floor.

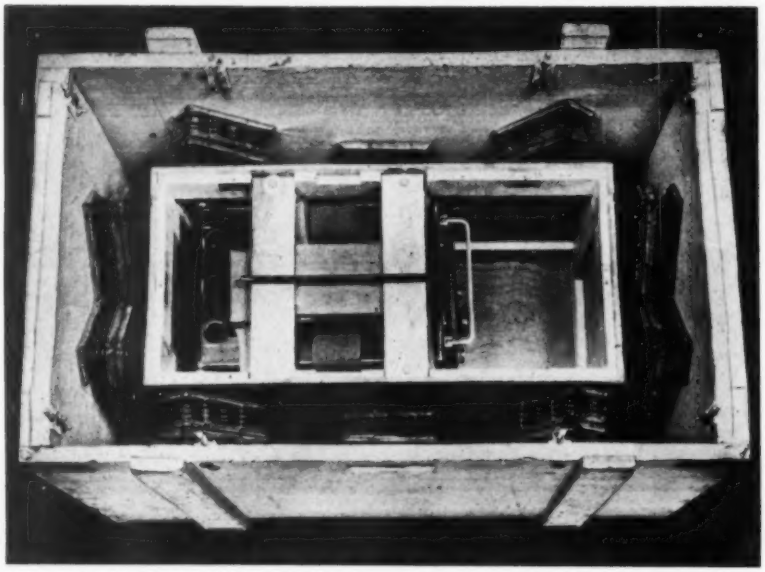
A trace of Antifoam A was wiped on the filling nozzles. The foam level immediately receded to a point just below the nozzles and stayed there, even when the machine was returned to full speed.

Antifoam A is being used successfully in several other filling operations. Coffee extract, for example, is de-foamed with a coating on the filling funnel. Each application lasts a month or so. Carbonated drinks, on the other hand, are more easily handled when the silicone is dispersed in the original syrup prior to bottling. Effective concentrations range in the order of 3.5 parts per million.

Numerous as these new materials and applications are, they represent only the beginning of the development work under way in this field. Realization of the ultimate usefulness of these remarkable materials rests in great measure on the ingenuity and resourcefulness of alert package designers and manufacturers throughout the country.

LOW-TEMPERATURE stability of silicone adhesives is demonstrated by lifting a beaker of dry ice with a strip of coated tape lightly pressed to beaker and to demonstrator's thumb. Directly opposite to *ab*hesives in function, silicone *ad*hesive has similar characteristic of unimpaired properties from minus 55 deg. F. to over 400 deg. F.





1. PRE-LOADED SPRINGS for 50-lb. load reduce shock to an Impact-Load Factor of 30 under 3-ft. drop test. The "i.l.f." factor as employed by TRE measures peak shocks rather than sustained loadings.

Impact-load factor

A consideration of the British Ministry of Supply in the design of cushioning for electronic equipment.

By S. C. SCHULER*

The two main considerations in the design of packaging for electronic equipment used (in Britain) by the R.A.F. and Naval Aviation are:

1. Moisture protection of the items when in store under adverse climate conditions;

2. The protection of the item from mechanical shocks in transit to its destination.

With regard to moisture protection, we must safeguard the item from corrosion of mechanical assemblies and to prevent deterioration in the electrical insulation of the circuits. This can be satisfactorily achieved by the use of water-vapor barriers such as metal-foil laminate, polyethylene film or sealed metal containers in conjunction with a suitable quantity of desiccant. These techniques are well known and have been found very effective in service use.

The shock protection or cushioning of packaging is rather more complicated and before discussing this in detail it is necessary to consider some aspects of the design of the equipment itself.

The "g" factor

It must be borne in mind that aircraft electronic equipment, like all aircraft parts, is designed for minimum weight and small size, and equipment mountings are stressed in terms of the loading or "g" factor likely to occur in flight. In the aircraft industry the term "g" factor has been used for many years. In a few words, this means that aircraft designed to a "g" factor of eight was designed or stressed to withstand forces or loads on every member equal to eight times those experienced in normal flight, so that during airobatics, where a change of acceleration equal to eight times that of gravity may occur, the aircraft and its equipment would survive undamaged. The "g" factor for the equipment is the ratio of the maximum safe dynamic loading to the static load or weight of the item. Thus, if equipment has a weight of 100 lbs. and a "g" factor of eight it can withstand sustained dynamic loads of 800 lbs.

The specifications for aircraft electronic equipment and flying instruments require such items to operate satisfactorily under these loadings (or "g" factors) and tests on centrifuges take place to simulate the loading conditions which actually occur in flight.

Similar conditions occur when packaged equipment is given a free fall, for instance, from the tailboard of a lorry.

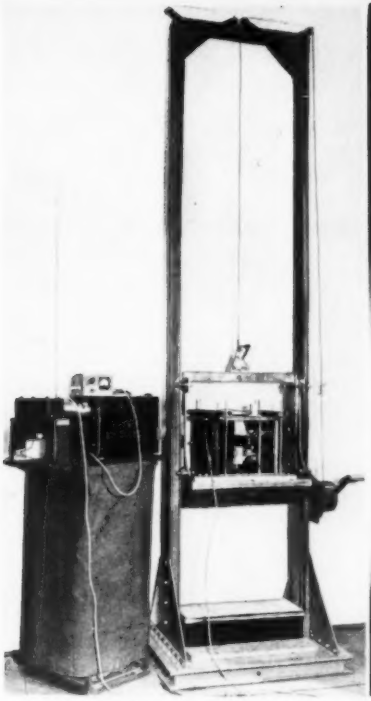
The equipment inside the pack experiences the same deceleration loading as the cushion which is resisting the downward pressure of the cargo. The loading starts at zero at the time of contact with the ground, increases to a maximum when the equipment is brought to rest and then again returns to zero as the compressed cushioning restores the equipment to its original position.

The main difference between the shock loadings imparted to packaged equipment and the loadings to which an equipment installed in an aircraft is subjected during flight is one of duration and characteristic. An aircraft maneuver may last for seconds or possibly minutes, but the package shock occurs in the form of a high peak load quickly—in a fraction of a second.

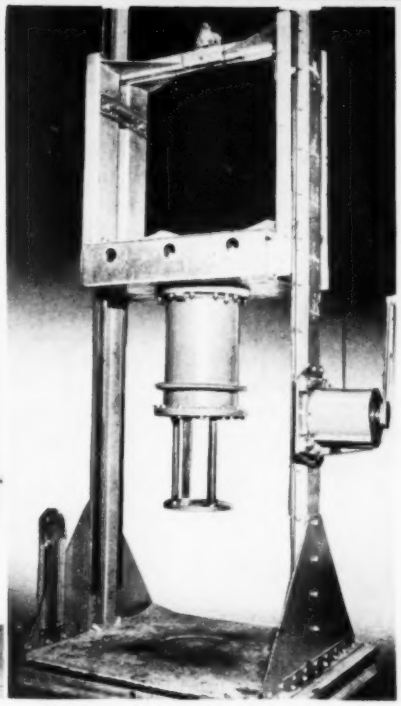
Experience has shown that equipment designed to survive g factors of, say, eight may be able to withstand higher shock loads (for a fraction of a second) without incurring damage.

This capacity can be increased by suitable design; for example, by making the supporting structure of the component more flexible. But there is a definite limit to progress in this direction, as, with the increase in flexibility, a structure will probably have a low resonant frequency of high amplitude. This may result in

* Telecommunications Research Establishment, Ministry of Supply, Malvern, Worcester, England. Published by permission of the Institute of Packaging, London.



2. TRE DROP TESTER, showing table, winch, mechanical release. Valve-type accelerometer mounted on equipment is connected to cathode-ray oscilloscope. Camera head is mounted on front of table.



3. PNEUMATIC RAM of tester, showing cylinder and piston. Schrader valve admits air to cylinder to deflect piston to correct position for shock which is required. Intensity of the shock can be varied over a wide range.

fatigue and failure of equipment when subjected to sustained aircraft vibration in flight.

The impact-load factor

In order to differentiate between the sustained loadings (or g factors) in aircraft equipment design and the short duration peak shocks in packaging, the term Impact-Load Factor has been introduced. The impact-load factor ("i.l.f.") is the ratio of the maximum dynamic loading to the static load which the item can survive under drop-test conditions.

The impact-load factor may be entirely dependent on the shock resistance of a single component. For example, wirebound resistors on ceramic tubes may crack under a shock while the other components are unaffected. In short, the impact-load factor is a measure of the ability of the most fragile component of the equipment to withstand shock.

The problem is further complicated by wide variations in the size, shape and weight and the size and impact-load factor ratios of various equipment. Radar scanners have large, accurately shaped reflectors which are easily distorted if great care is not exercised in the design of the pack. Main electronic units are frequently enclosed in thin aluminum shells which are secured to the front panel only and do not allow any substantial loads to be placed on the shell.

To summarize, the electronic engineer is principally concerned with designing his equipment with minimum weight and size to meet stringent operational requirements.

Owing to the vibration problem, it may not be possible to achieve a high impact-load factor.

The packaging engineer is, therefore, not going to be popular if he asks for modifications which may materially increase weight and size to increase the resistance of the equipment to transit shocks.

It is clear, however, that improvements in the design of equipment to assist the packaging engineer could result in a saving of packaging materials and shipping space, and so every effort must be made to meet both sides of this complicated problem.

Packaging considerations

In packaging, we need to know:

1. The weight and dimensions;
2. The maximum shocks to which the package may be subjected;
3. The shock or impact-load factor of the equipment.

With regard to the second point, the three services have agreed upon a schedule of tests which is issued as P.P.C.O. Bulletin No. 16. On shock testing, the schedule specifies the following drop tests of the packaged item onto a concrete surface:

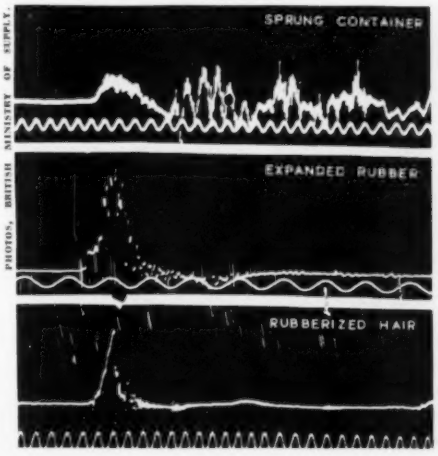
a. For packages up to 150 lbs., height of drop 4 ft. 6 in.

b. Over 150 lbs. and up to 250 lbs., height of drop 3 ft.

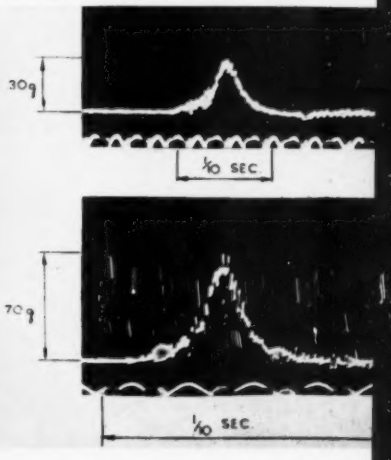
c. Over 250 lbs. and up to 500 lbs., height of drop 2 ft.

Obviously the height of drop has an important bearing on the size and

4. SHOCK WAVEFORMS obtained with accelerometer from three types of cushioned packs dropped from 4½ ft. Sprung container, expanded rubber and rubberized hair had mean peak values of 25, 100 and 50 i.l.f., respectively.



5. DURATION of typical shock waves on drop tests. Two typical waveforms for 30 and 70 i.l.f. The 30-i.l.f. pattern was taken with film running at 4 in. per second; the 70 i.l.f. at 12 in. per second.



complexity of the final pack. As I have explained, the cargo must be allowed to continue moving for a certain distance inside the packing case after impact on the ground. Consider a pack with a linear load deflection cushioning characteristic with a cargo having an impact-load factor of 25. When dropped from a height of 4 ft. 6 in., the distance of deflection, or stopping distance of the cargo inside the pack, will be 4½ in.; when the pack is required only to survive a 1-ft. drop, the stopping distance would only need to be 1 in.

We turn now to the third requirement—the maximum shock or i.l.f. that the equipment can withstand without damage. To generalize on the impact-load factors of various equipments can be misleading and I prefer to see this determined by actual experiment. As a rough guide, however, it can be said that impact-load factors for airborne electronic equipment very rarely are higher than 100, the average being somewhere between 40 and 75, with an increasing number of items in the range 25 to 40.

At the Telecommunications Research Establishment we have a machine (Fig. 2) for determining the impact-load factor. This consists of a metal carriage or table approximately 2 ft. square on which the equipment is mounted. The table is free to move up and down between two vertical steel posts rather like a guillotine. Mounted on the underside of the table is a pneumatic ram (Fig. 3) which acts as the retardation pad or cushioning. The ram consists of a cylinder and piston, air being pumped in or extracted through a valve. The intensity of the shock can be varied over a wide range—the greater the amount of air within the cylinder, the better the cushioning and the lower the shock.

With this ram an impact-load factor range of five to 80 is obtainable with a drop height up to 54 in. and table loads up to 100 lbs. The equipment is mounted on the table, which is raised to the necessary height. The ram is set to give a maximum cushioning—that is, to reduce the peak shock to give an impact-load factor of five. The table is allowed to fall onto a steel plate and the equipment is then checked for mechanical failure.

This procedure is repeated in increments until we find that shock figure which will cause some mechanical or electrical failure. This shock figure determines the impact-load factor for the equipment and we must provide sufficient cushioning in the pack which is being designed to reduce the shock to below this specific determined value when the package is dropped.

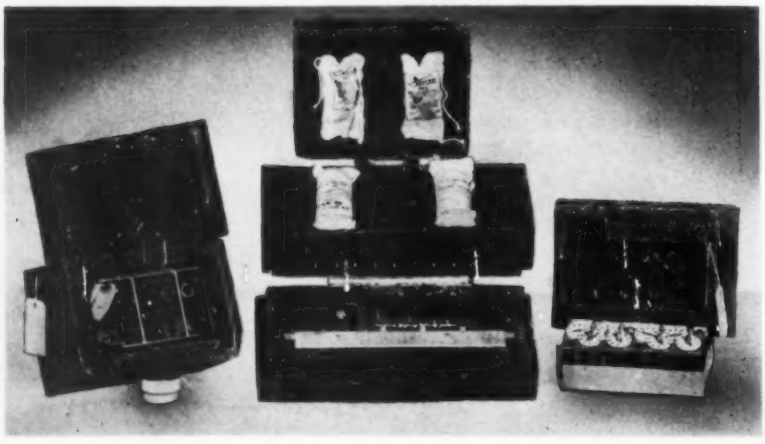
It might be said that all this is rather elaborate and is it really necessary? The alternative is an intelligent guess, which will probably result in either:

a. Too high an i.l.f. being chosen, with the risk of a certain percentage of breakage;

b. Too low an i.l.f. being chosen, which will result in the pack being unnecessarily large with greatly increased cost of the cushioning.

Having arrived at the impact-load factor of the equipment, the height of drop, the weight and dimensions, we can design the cushioning for the pack.

6. RUBBERIZED HAIR in molded form as used in typical British electronic-equipment packs. Note the provision made for silica gel.



Cushioning properties

There is, unfortunately, no simple "one best method" of cushioning equipment. We need to evaluate each application thoroughly in order to arrive at a cushioning system which will have a high technical performance and low cost. It is interesting to note that the efficiency of the cushioning can be greatly influenced by the manner of application. For example, if compressive cushioning is attached to a packing case on all six interior faces, friction will be introduced on the four faces parallel to the direction of drop. The efficiency of the cushioning under this arrangement will, therefore, be much improved.

The properties of cushioning materials and their application is a vast subject and there is only time here to summarize some of the advantages and disadvantages of better known cushioning methods.

TENSION SPRINGS

Advantages:

1. Simplicity of fitting for very light cargoes.
2. All metal, therefore wide temperature range.

Disadvantages:

1. Low-frequency resonance.
2. Inefficient, because frictional damping cannot be employed.

PRE-LOADED COMPRESSION SPRINGS

Advantages:

1. Saving in shipping space due to greater energy absorption for small deflection. A 2-in. spring pad will give an i.l.f. of 75 for 4 ft. 6 in. drop. This high efficiency is achieved by pre-compressing the springs to half their normal length so that the spring pad operates at a point where the greater energy can be absorbed.
2. Freedom from low-frequency resonances.
3. Available in pads for ease of fitting.

Disadvantages:

1. Not too easy to apply to cylindrical cargoes and cases.
2. Requires a more expensive stout outer case because loads are confined to the small areas of the pads.

(This article continued on page 222)

A Statement

by the Originators of Grade A Greaseproof Barriers

Relative to Military Specification JAN-B-121, Amendments 1 and 2

There has been considerable misinformation and confusion as to what products qualify under Amendments 1 and 2 of Military Specification JAN-B-121.

The Specification has been amended several times for the purpose of assuring that the armed forces obtain only the highest quality materials that have proven their worth in actual field performance.

The requirements of the Amendments are clean-cut. To meet them, a greaseproof barrier must resist both natural and synthetic slushing agents for extended periods. It must be neutral and practically acid-free. It must stand up under aging tests without change.

All grades of INDUWRAP, the original Grade A, meet and exceed without qualification all of these requirements and we so certify on all shipments.

Importance of a Completely Creped Product

More than twelve years' successful usage by industry and the military has established *creped* INDUWRAP as the most satisfactory greaseproof wrap on the market. Angier's process of creping after combining kraft and acetate film, produces a material of maximum flexibility and resilience. It is easy to handle—saves time and labor. It conforms to odd-shaped objects. It gives greater cushioning protection.

To the best of our knowledge, INDUWRAP is the only structure of any Grade A, currently offered as a completely creped product, that will pass Amendments 1 and 2 of JAN-B-121.

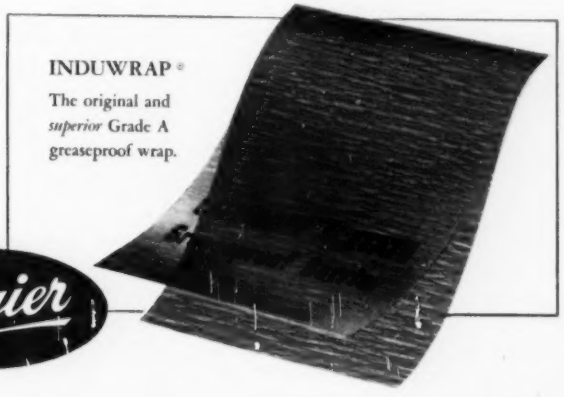
Acetate The Best Grease Barrier

Over the years, Angier's research group has spent thousands of man hours studying all commercially available films offered as greaseproof barriers. Time and time again, cellulose acetate has proved its superiority—in the laboratory and by actual field performance—for use with natural and synthetic slushing agents. There are other films in use and some of them have a very definite place in industrial packaging. But none of those now available has lived up to the "cure all" claims that have periodically been made for them. INDUWRAP'S structure of cellulose acetate, laminated to Red Kraft by an exclusive neutral adhesive, makes it the finest greaseproof wrap available today for use on slushed metal parts.

Developed by Angier during World War II to meet a new packaging requirement, INDUWRAP'S standards of excellence gained such wide acceptance that it became the basis for the original Grade A greaseproof barrier Specification. Today, though the Specification has been revised upward, INDUWRAP still exceeds requirements.

Be sure your products are properly protected. Buy INDUWRAP, the original and superior Grade A—made to do the job, not just to pass tests.

For new Induwrap data, phone Framingham 6146 or write:
ANGIER CORPORATION, Framingham 11, Mass.



Also: VPI Wrap—modern **vapor** rust preventive. **Snake Tape**—reinforced gummed tape for faster, stronger sealing. **Glass-wrap**—new, amazingly strong waterproof paper. **Coilwrap**—for the metalworking industry. AND other protective papers for industrial, building and farm needs since 1895. Distributors in Principal Cities.

Questions & Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Application of gloss lacquer

QUESTION: We would like to apply a clear finishing gloss lacquer to our printed labels, boxboard and display signs. What kind of quick-drying lacquer and coating machines would we need for sheets not larger than 20 by 30 inches? We have also considered spraying the sheets.

ANSWER: There are several companies that make complete coating machines and drying ovens for lacquering paper in sheet form and in various sizes. This equipment is compact, can apply different amounts of many types of lacquer, remove the solvents and humidify the paper to reduce curl. The capacity of the machines will depend upon whether hand or automatic feeders are used, the drying capacity of the oven, the amount of the applied coating and the unit's solvent system. There will be some make-ready time which is necessary to prepare the coater for the size of sheet and the type of paper or paperboard, and to adjust the coating rollers to apply the correct amount of the lacquer solution.

Such a coating machine must have a good ventilation system to remove solvent fumes from the room and the feeding area. It also must meet certain regulations as to fire – and health standards, which vary in different localities. The kind and amount of the lacquer used will depend upon the requirements for gloss, durability and product resistance, and also upon the kind of ink and paper used. There are many formulations of nitrocellulose lacquers available for paper coating and these are economical and have solvent systems that allow rapid drying. However, there are many other resin formulations that are widely used, particularly where very high gloss or special properties are needed. It will be necessary for you to use papers which have surfaces especially prepared for lacquer. Usually clay-coated or super-calendered paper are used. Tests should also be made of the inks, to be sure they are receptive to the lacquer and that they will not bleed or be softened by the solvents.

Paper labels on polyethylene

QUESTION: We would like to heat seal a label on a polyethylene bag. We were under the impression that it is not possible to do so except by using special types of coated label paper, but we have heard that regular paper will readily seal to polyethylene. Is it practical to try to heat seal a printed or plain paper label onto the face of a polyethylene bag without any form of heat-sealing adhesive?

ANSWER: It is not practical to heat seal plain paper labels to polyethylene bags. Plain paper can be strongly sealed to polyethylene under special conditions; but it is necessary to have good control of temperature and pressure, and a sufficient mass of polyethylene. However, these conditions cannot be maintained over the entire surface of a label to secure a good heat seal without distorting or blocking the walls of a bag made of polyethylene film. For effective adhesion, a label should be strongly sealed to the edges and this would not be possible even if the other conditions could be met.

The best answer is to use a coated label paper, the adhesive backing of which is of a type which can be fused by heat and which will then stay tacky long enough to be applied to the polyethylene bag. This type of label gives good adhesion if the proper label coating is selected and will not show heat distortion even on thin films. These types of labels are readily available and various types and styles of machines have been built to apply them to all types of packaging materials and containers from glass bottles to thin plastic films.

Testing plastic-paper adhesion

QUESTION: Is there any testing method or testing machine that will give a quick and accurate test for the adhesion of plastic coatings and plastic films to paper? We use many kinds of plastic resins and many types of paper, but we are never sure of the real value or the uniformity of the adhesion to the paper.

ANSWER: There has been much work done in attempting to establish a means of measuring the true value of the bond of plastic coatings and films to paper, cloth and other bases.

For heavy coatings or laminated films, the generally accepted procedure is to use a 1-in.-wide strip, delaminate a portion sufficient in size to be clamped in the jaws of a tensile tester and record the force required to separate the coating from the paper. If the paper is a soft, low-strength type and the coating or film is well adhered, then the value for this test method is the internal strength of the paper, provided it is possible to make the test at all. However, this method works well enough for strong papers and relatively lower strengths of adhesion.

There have been many methods and devices proposed which have attempted to measure the total adhesive force per unit of area, but none of them has found universal application or acceptance. There is certainly a demand for a quick and accurate means of making this type of test, particularly by those who make or use thermally applied coatings of polyethylene.





"Brand identity is very important to us... that's why we use Du Pont 'Cel-O-Seal' bands on our varied line of fine liqueurs. These colorful, printed bands help our Package Design Department give individuality to each package, at the same time giving us the perfect way of preserving the Arrow family resemblance."

says Mr. Thomas McMaster, President, Arrow Liqueurs Corporation Detroit, Michigan

FREE PACKAGING SERVICE: See what a specially designed "Cel-O-Seal" band does for *your* package! Send us a labeled dummy bottle. Our packaging experts will band it, return it for your inspection. No charge—no obligation! Write E. I. du Pont de Nemours & Co. (Inc.), "Cel-O-Seal" Section, 9529-A Nemours Bldg., Wilmington 98, Delaware. "Cel-O-Seal" cellulose bands are also sold by Armstrong Cork Co., Lancaster, Pa., and I. F. Schnier Co., San Francisco, Calif.

DU PONT

Cel-O-Seal Bands • "Wind-O-Band" Seals

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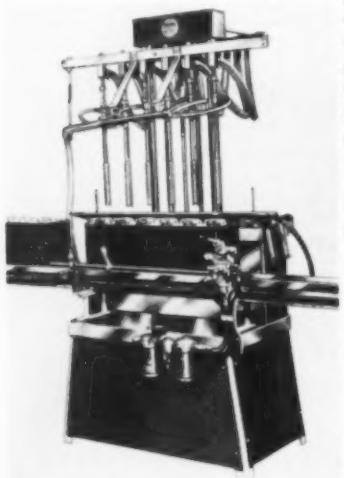
BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

Equipment and materials

A NEW MOISTURE- AND GREASE-RESISTANT BOX
patented by the Hinde & Dauch Paper Co., Sandusky, Ohio, is reported to offer outstanding economy in the packaging of meats and other extremely moist products. The new container, called the "Never-Leak" box, is of one-piece, die-cut corrugated construction. It can be supplied with the inside glassine laminated, covered with a special coating, or a combination of both. It is said to be capable of holding liquids for weeks without any apparent seepage. Special self-locking ends of the body and cover allow easy assembly without the use of tape, stitches or glue. Handles formed by the self-locking ends make the body of the box adaptable as a tote tray. The cover can be furnished with or without a device for locking the cover to the body of the box. Stacking strength is reported excellent. The "Never-Leak" box is also suggested for transporting candy, wax, powdered and granulated products, vegetables, sea foods, lard, margarine, stock and poultry feeds, and many other products.

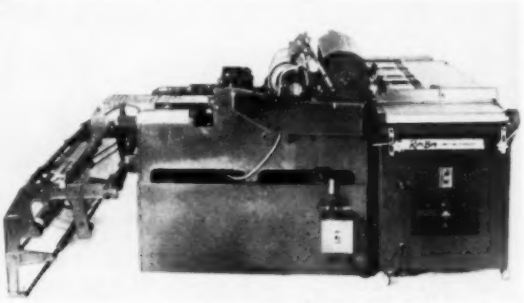


A NEW-TYPE GRAVITY FILLER
that fills from the bottom up has been announced by the Packer Machinery Corp., 30 Irving Pl., New York 3. Specially designed for filling foamy liquids in 1- and 5-gal. containers, this new Model SFN will fill liquid soap, waxes, detergents and all other free-flowing foamy materials free from foam or drip, according to the supplier. Specially engineered filling-nozzles that fill from the bottom up are said to eliminate foam completely. Up to eight 1-gal. or four 5-gal. containers can be filled simultaneously; changeover from one size of container to another is said to take only a few minutes. Features of the unit include a 12-ft. roller conveyor for easy handling of filled containers and a pneumatic spout head controlled by a fingertip air valve which raises and lowers the filling nozzles. Several models are available to fit the requirements of the individual packer. Simplicity of the machine's operation does away with the need for skilled operators, according to the manufacturer.

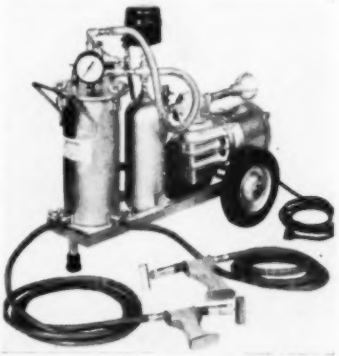


A NEW INHIBITOR
that is reported to permit packaging in metal of quaternary ammonium compounds (used in the manufacture of disinfectants and other corrosive liquids) has been discovered by R. M. Hollinghead Corp., Camden, N. J. Previously the compounds were highly corrosive when packaged in metal and manufacturers regularly packaged the products in glass. The new inhibitor is to be marketed as "QAI" and chemically is composed of 2 hydroxypropylamine nitrite. It is said to be completely soluble in water-base materials and is reported to be equally effective as an inhibitor in liquid soaps, phenolic and pine disinfectants, emulsion floor wax and other water-base compounds with a pH 8.0 or higher.

A COUNTER-STACKER FOR POLYETHYLENE BAGS
developed by the Roto Bag Machine Corp., 130 E. 13 St., New York 3, electronically counts bags in predetermined numbers from one to 100, stacks them by accurate count and moves the resultant stacks away from the machine at regular intervals. This labor-saving device leaves the packer completely free to inspect finished bags, thus aiding in quality control. The new Roto Computing Stacker is also equipped with a remote-control, electric-eye adjusting switch. The remote-control switch permits stopping the machine to intercept bad or questionable bags, but does not permit starting the machine. The electric-eye switch enables advancing or retarding the print in relation to the cut-off, an important factor where there is an abrupt change in the print repeat. The unit can be attached to all of the company's Model PO-2 machines by a simple adaptation and is equally applicable to the PO-5 models up to the size range of the PO-2. Illustrated is the computing stacker applied to the Model PO-2, showing the remote-control, electric-eye adjustment switch.



A NEW PORTABLE GLUING UNIT
complete with air compressor, introduced by Gluetools, Inc., 1928 N. Meridian St., Indianapolis, Ind., is said to offer easy, fast and clean application of glue for plants using cold glue for sealing cases and cartons. The gluing outfit is also practical for plants which are not equipped with compressed-air lines or find connections too far away for practical use. It is equipped with a direct-drive, piston-type, precision-built air compressor and storage tank, which reportedly makes possible a smooth flow of compressed air free from pulsation, for ap-



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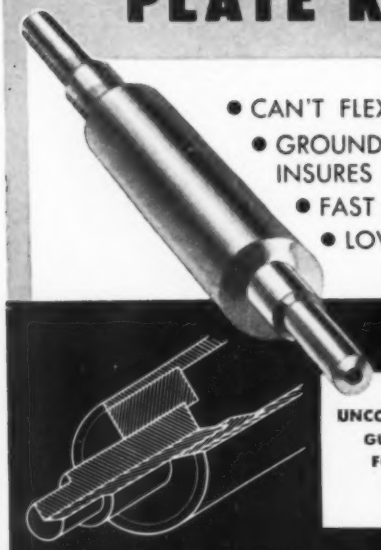
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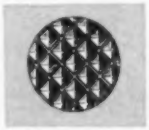
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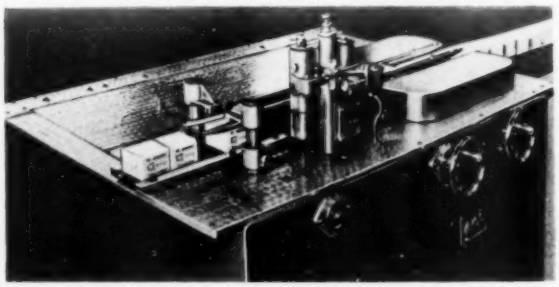
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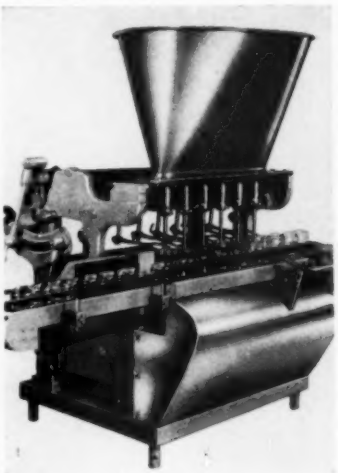
plying glue through either flat or roller-type automatic spreader heads. The air compressor operates from a ¼ h.p. electric motor. Various sizes of stainless steel, corrosion-resistant pressure tanks ranging from 1- to 10-gal. capacity are available with or without the air compressor. The equipment accommodates from one to eight operators simultaneously.

SPEEDIER IMPRINTING OF PACKAGES
is claimed for the newly redesigned Markocoder 3M automatic package-imprinting machine made by Adolph Gottscho, Inc., Hillside 5, N. J. Called the "Golden Jubilee" Markocoder 3M, this improved machine, which prints identification data and



code dates on the top or ends of cartons and boxes as an integral packaging-line operation, permits imprinting of small cartons at rates up to 600 units per minute, adequate to match the production of all present-day high-speed cartoning machines, according to the manufacturer. Length of the machine has been shortened to only 54 in. Its versatility has been increased to handle cartons of unusual dimensions within its range, as well as rectangular cans. The machine prints very close to the bottom of the package and can be adjusted for close registration control during the regular imprinting operation. Quick change-over for size and a more rapid method of changing ink color and die wheel are additional improvements reported by the supplier.

HIGH-SPEED FILLING AT LESS COST
is reported for the new Type 19A filling machine for viscous and liquid products, according to the Hope Machine Co., 9400 State Rd., Philadelphia 14, Pa., maker of the filler. By eliminating the long machine table, increased production speeds of up to 250 containers per minute are achieved. Reduced costs are effected without sacrificing any of the machine's time-tested principles, according to the supplier. In operation, containers move from the infeed conveyor directly



onto the rising table. After the "bottom-up" filling, containers move immediately onto the discharge conveyor. The unit can be used for filling glass jars, plastic bottles, metal cans and paper cups. The manufacturer reports testing the machine for filling containers of mayonnaise, salad dressing, French dressing, jellies,

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Of course, the lady's thrilled. And who wouldn't be? For one thing, the feather, encased in brilliant, crystal-clear Kodapak Sheet, is as spic and span as the day it was packed. Then, too, all around her are examples of other packaging tricks you can do with this amazing material—tough, transparent, color-true, non-distorting—sparkling with a sales appeal all its own.

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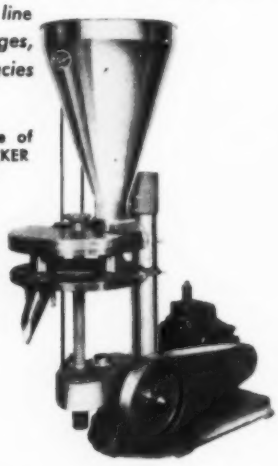
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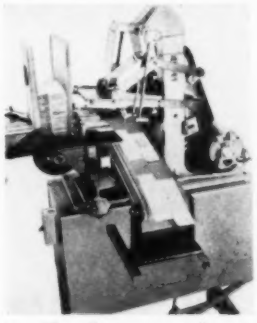
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CANADIAN — [illegible] SALES COMPANY, TORONTO, CANADA EXPORT — THE ESTES COMPANY, INC., NEW YORK, N. Y.

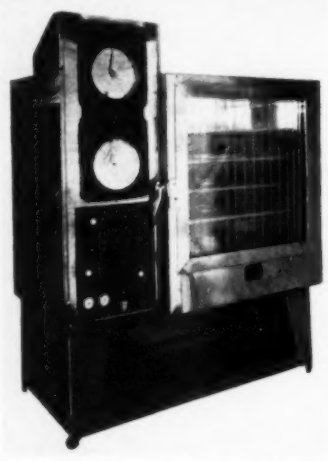
Equipment and materials

jams, preserves, sauces, liquid soaps, glue, grease, cosmetics, pharmaceuticals and other viscous products. The machine offers accurate quantity adjustment from ½ to 32 fluid ounces and the supplier reports that on some cosmetic operations accuracy has been held to $\frac{1}{10}$ of a gram.

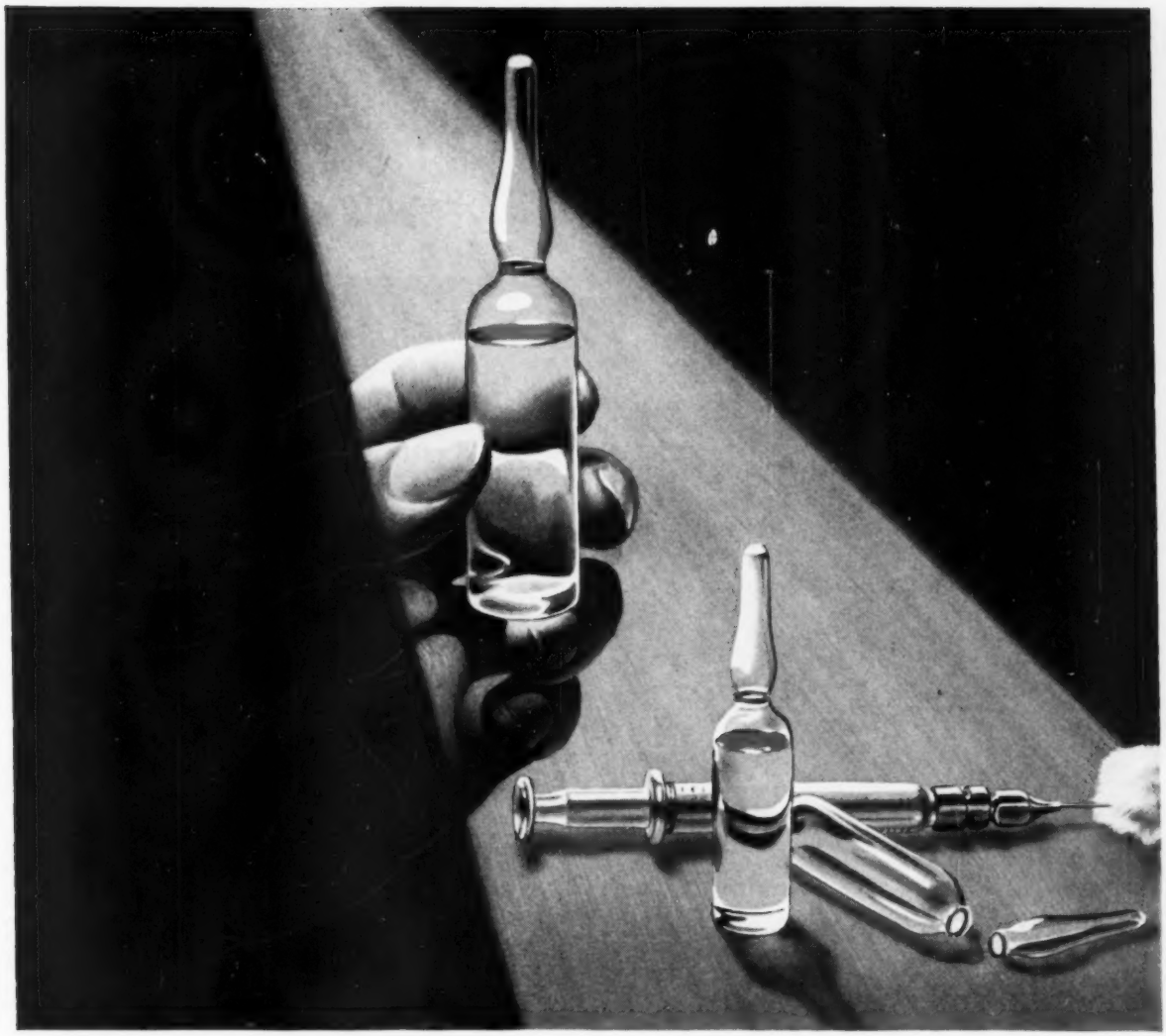
A NEW MARKING MACHINE
that automatically feeds flat folding boxes, corrugated cartons, plastic panels and other flat objects up to ¾-in. thick into the unit, prints and ejects them at a rate of 80 imprints per minute is being offered by the Markem Machine Co., Keene 40, N. H. The machine, designated as Model 45AE, is said to provide faster, more economical imprinting of variable information. Items are printed as needed, thus eliminating inventory. An automatic feed table has adjustable side gauges which are easily moved to accommodate objects up to 5 by 14 in. Maximum imprint area is $2\frac{5}{16}$ by $6\frac{11}{16}$ in.; the imprint may be located anywhere in an area 5 by 11 in. The floor-mounted unit occupies 36 by 28 in. of space and is 50 in. in height. It is powered by a $\frac{1}{6}$ h.p. motor.



A NEW ATMOSPHERE-CONTROL CABINET
designed and built specifically for any type of water-vapor testing within the limits of minus 20 deg. F. to 200 deg. F., with a relative humidity of 18% to slightly under 100%, has been announced by The Package Materials Laboratories, Inc., Dept. FM-5, 461 Crescent Rd., Hatboro, Pa. This type of cabinet is used primarily for testing barrier materials—paper, kraft, corrugated boxes, cellophane, waxed paper, plastics, etc., as well as packages of all types of materials with the product already inside, just as they are merchandised. Foods, greases, fabrics, tools, chemical, biological, metallurgical, pharmaceutical samples, or any others which may be affected by temperature and/or humidity may be tested on the machine. The new model, designated the 15-CF Atmosphere Control Cabinet, may be ordered equipped with conventional or electronic controls.



NOVELTY COLORFUL COTTON BAGS FOR CHRISTMAS
merchandise are being offered by the Chase Bag Co., Cotton Specialty Dept., 309 W. Jackson Blvd., Chicago 6. Designed to add seasonal sales appeal to products such as candy, toys, novelties, golf tees, flour, baking mixes, bird seed, dog food, etc., these new bags come in standard designs—Christmas stripes, boot shapes, Christmas scenes, etc.—or the company's design department will develop exclusive individual designs



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Wrap-O-Matic, fully automatic. Packages both conventional and irregularly shaped items at high speed. Used for packaging confections, bakery products, pencils, cigars and other products.

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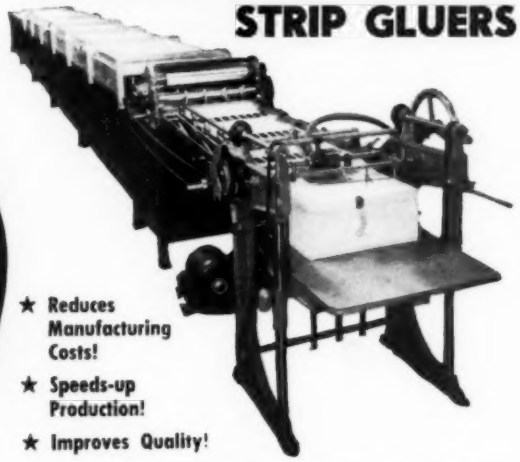
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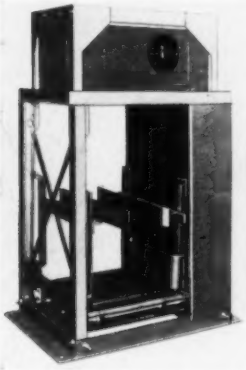
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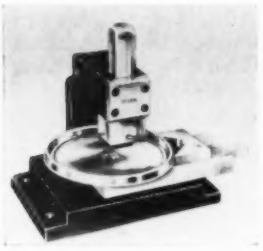
for any product. The bags are also suggested for novelty mailing pieces, as hand-out items and for samples. For mailing purposes, greeting cards or addressing labels are sewn into the seams by the manufacturer.

A NEW SCALE FOR CHECK-WEIGHING FILLED BAGS between the bag-filling scale and the bag-sewing machine, or for check-weighing cartons between the carton-filling machine and the carton-sealing machine, has been announced by the Thayer Scale & Engineering Corp., E. Water St., Rockland, Mass. This new Model 100S Thayer Checkweight Scale checks and indicates the weights of filled packages before they have been closed, discharges properly filled containers, signals and holds off-weight packages, all automatically. The conveyor on the unit is placed at the same elevation and adjacent to the conveyor carrying the packages to be check-weighed. The scale conveyor runs continually until the package is fully on the scale. If the package is properly filled, the conveyor automatically starts again, discharging the package. If the package is off weight, a signal sounds and the package may be either discharged or held on the conveyor, as desired. Exact over or under weight is indicated on large dials on each side of the scale, or the dials may be remotely mounted. The conveyor can be mounted as close as 8 in. to the floor.



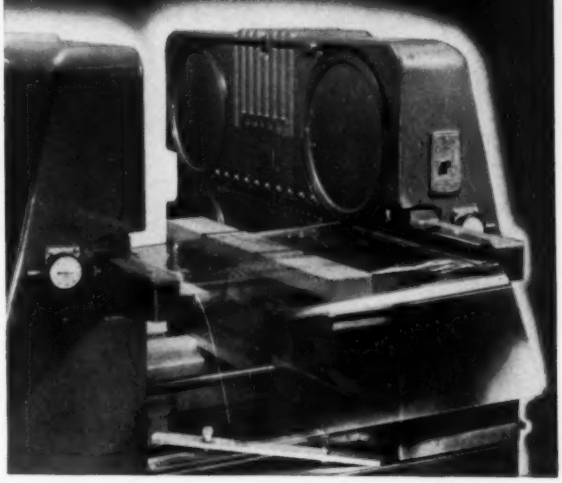
A PRICE CUT IN POLYETHYLENE-CELLOPHANE laminate film averaging 20% is announced by Cheslam Corp., division of Chester Packaging Products Corp., Yonkers, N. Y. All gauges and combinations of the company's Cellothene film laminate are now being sold at the new reduced prices.

A NEW HAND FIXTURE FOR EMBOSSING CAN LIDS introduced by M. E. Cunningham Co., 1025 Chateau St., Pittsburgh 33, Pa., embosses size and content coding on paint-can and similar-type lids. The new unit, designated the SF-100-AE Embossing Fixture, incorporates a stamping fixture frame, a stamping fixture with movable type, a plastic matrix and a special gauge which centers the marking, making the unit adaptable for embossing all sizes of can lids up to 1-gal. size. Only male type or characters are needed; a special plastic matrix serves as the female die. This matrix can be used and re-used, and need not be changed as the stamping characters are changed. Size of characters recommended is $\frac{3}{16}$-in.



A NEW DOUBLE-WALL POLYETHYLENE DRUM LINER with an insulating air space, designed to reduce the possibility of rupture by distributing stresses more evenly over its entire surface, has been announced by the Mehl Mfg. Co., division Sydney-Thomas Corp., 2057 Reading Rd., Cincinnati 2, Ohio. The liner, called the "See-Safe" Multiwall Airliner, may be used with either fibre or steel drums for transporting acids,

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Model-144 THERMOBEADER *Duplex*

Adjustable for handling sheet plastic rolls, strips or blanks 2" to 20" wide, the Thermobeader Duplex simultaneously beads *two* parallel edges at high speed. Dual heads can ALSO be used *independently* for single edge beading which gives you the same capacity as TWO single edge beaders. Substantially reduces production costs!

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THERMODRAW PRESSES: For drawing caps, covers, jacketing and embossing.

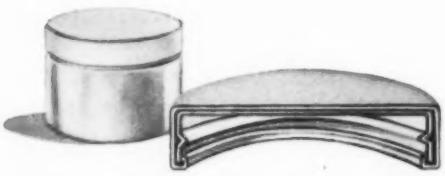
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Equipment and materials

alkalis, foods or other hard-to-handle liquid or solid products. Made of 0.015- and 0.02-mil polyethylene, the liner thus gives a wall thickness of 0.03 and 0.04 mils. It is available in flat bottoms for 15,- 30- and 55-gal. drum sizes. The transparent double wall increases the strength of the liner and distributes shocks and pressure through relative movement of the two walls, thus lessening the possibility of tearing.

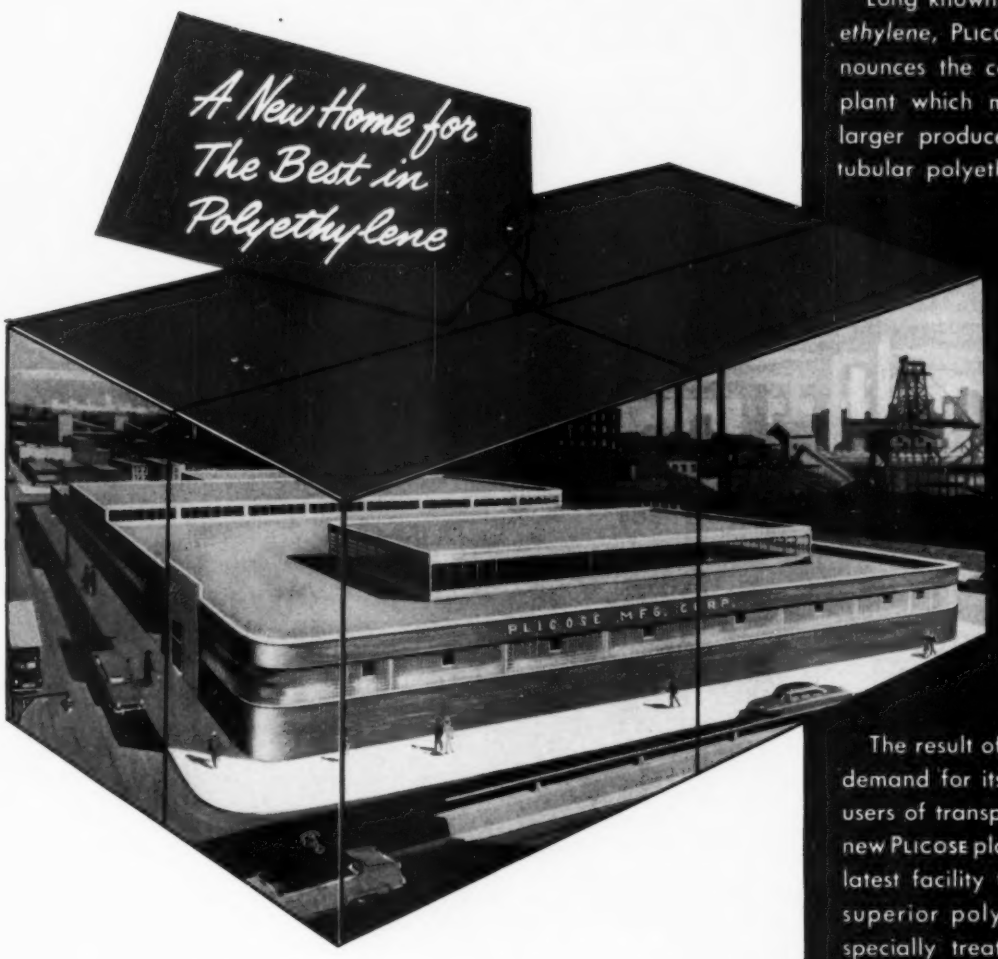
A NEW AUTOMATIC BAGGING MACHINE
with packing speeds ranging from 18 to 20 100-lb., open-mouth multiwall bags a minute has been announced by Union Bag & Paper Corp., 233 Broadway, New York 7, exclusive sales agents for this Inglett & Corley automatic weighing and filling machine. The bagger works in conjunction with a moving conveyor and sewing head. The weighing and filling cycle is completely automatic and begins by pushing the starter button. This automatically delivers pre-weighed, free-flowing, non-briding material through the machine's bag chute in an endless series. The filled weight drops each bag onto a moving conveyor belt which carries them through the sewing head. In addition to its high speed and accuracy, the unit is said to offer economy, versatility and labor savings.



A NEW OVERWRAP TRAY AND SET-UP MACHINE
for making the package, developed by the Research and Development Department of Alford Cartons, Industrial Ave., Ridgefield Park, N. J., is reported to effect economies in original cost, in packing and in the amount of space required for pre-filling storage. Construction of this patented tray is such that it affords the most protection for contents of any tray now available, it is claimed. The tray cannot be used on conventional set-up machines, but it can be set up by hand. The patented set-up machine designed for this new tray, called "Rigid-Pak," requires only 3 sq. ft. of floor space. The machine is adjustable to any speed between 30 to 90 trays per minute. Rigid-Paks may be used for tomatoes, fruits and vegetables, baked goods, candies, nuts and other such products. The new trays are available in all popular sizes, with or without end wings.



A NEW NARROW-BELT CONVEYOR
specially developed to handle small-dimension, light-weight containers has been announced by the Island Equipment Corp., 27-01 Bridge Plaza N., Long Island City 1, N. Y. It is available with a 5-in. frame, which takes 1-, 2- or 3-in. belts, and an 8-in. frame accommodating belts 4, 5 and 6 in. wide. The new model may be had in any length of 5-ft. increments.



Long known for *the best in polyethylene*, PLICOSE now proudly announces the completion of its new plant which makes it one of the larger producers of both flat and tubular polyethylene.

The result of a steadily increasing demand for its proven quality from users of transparent packaging, the new PLICOSE plant incorporates every latest facility for the production of superior polyethylene, including specially treated film for printing.

PLICOSE regrets only that the raw materials situation precludes satisfying entirely the great demand for *the best in polyethylene*. However, PLICOSE will endeavor to take care of your requirements to the limit of its abilities.

The PLICOSE reputation for quality will be jealously guarded in the hope that, as raw materials quotas are increased, we shall be able to fulfill all the demand for *the best in polyethylene*.

Plicose
THE BEST IN POLYETHYLENE

PLICOSE MANUFACTURING CORP.

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Plants and people



R. D. Handley

Robert D. Handley has been appointed director of advertising and sales promotion for the **Standard Packaging Corp.**, New York. Mr. Handley has been active for many years in the packaging field, having been general manager of the Western Packaging Products Co. and with the Sylvania Div. of American Viscose Corp. His headquarters will be in the Chrysler Bldg., New York.

R. Frank Weber has retired as general supervisor of materials-handling and packaging research for **International Harvester Co.**, Chicago, after 44 years of service with the company. **Fred H. Wiley,** who has been with the company's manufacturing research department for the last 10 years, will succeed Mr. Weber. Mr. Weber plans to continue his business activities by serving in an advisory capacity to selected industries and the materials-handling and packaging professions. He will also be associated with the Defense Department's research and development board in Washington. Mr. Weber is widely known in the packaging industry, having been actively associated with a number of trade associations in the packaging field.

The Tri-State Plastic Molding Co., Inc., Henderson, Ky., has opened a new plant in Owensboro, Ky. This expansion releases space in the Henderson buildings for use by the firm's die-casting division.

The Vulcan Steel Container Co., has opened new manufacturing facilities in Birmingham, Ala., for the production primarily of slip-cover cans to meet the growing needs of Southern industry and to service customers of the **Vulcan Tin Can Co.,** Bellwood, Ill.

Plax Corp., West Hartford, Conn., maker of polyethylene squeeze bottles, has opened a West Coast district office at 4501 S. Santa Fe Ave., Los Angeles. The office is headed by **Richard W. Hall,** formerly Cleveland district manager. To service the San Francisco area, **M. Walthall Turner** will establish resident headquarters at 300 Seventh St., San Francisco, as assistant to Mr. Hall. Warehousing facilities have been established in both cities.

The H. P. Smith Paper Co. has elected **Jack F. Pendexter** as vice president and appointed **Arthur E. Gerken** as general sales manager. Mr. Pendexter will also continue as sales manager of the Meat Packer Div., with **Earl Townsend** being named assistant sales manager. Mr. Gerken will supervise sales of the company's coated, laminated and impregnated papers, fabrics and foils for packaging and protective coverings.



A. A. Frymark

Milprint, Inc., Milwaukee, Wis., has appointed **Alois A. Frymark** as director of purchases, succeeding the late **Herman Hansen. William F. Boyer** has been named to head the foil division and will direct national foil sales from headquarters in Milwaukee. Prior to joining Milprint, Mr. Boyer was national sales manager of foil for the Kaiser Aluminum Co. **Nathaniel S. Peters** has been appointed manager of Milprint's soft lines division,



W. F. Boyer (left) and N. S. Peters

with headquarters in Milwaukee and will direct sales throughout the country for all types of soft-lines packaging.



W. Heller, Sr.

William Heller, Sr., chairman of the board of Milprint, has recently been featured on the cover of *The American Printer*, with a biographical story on the editorial pages. Mr. Heller, former president of Milprint, has been with the company more than 50 years. Mr. Heller is one of only 12 living Americans to be awarded an honorary life membership in the AFL International Printing Pressman's Union.

William D. Browne and **Alonzo Fowle** have been appointed as city sales representatives for Milprint.

Milprint's newest plant is now under construction on Shore Rd., South San Francisco, Calif. The new unit will supplement operations in Los Angeles and Vancouver, Wash. It is expected that Milprint will move from its present location at 55 Duboce St. to the new location some time around Dec. 1.

James P. Stuart has been appointed to Milprint's San Francisco sales office. Mr. Stuart was formerly public relations counsel for Sertoma International.

American Can Co., New York, has opened its new multi-million-dollar Lemoyne, Pa., plant. Civic and governmental leaders and can company executives including **R. F. Hepenstal,** Canco's vice president of manufacture, and **S. D. Arms,** the company's Atlantic Div. vice president, took part in the dedication ceremony. The plant, with a rated production capacity of 400,000,000 cans a year, was built to meet the growing needs of the fruit and vegetable packing and chocolate-syrup industries of central and eastern Pennsylvania and the Appalachian areas of Maryland, West Virginia and Virginia. **R. J. Odiorne** is manager of the plant.

Lynch Corp., Toledo, Ohio, has transferred the sales and service activities of the Packaging Machine and Par Compressor Divisions from Toledo to Anderson, Ind. The Packaging Machine Div. will continue the production of its machine at the Toledo plant, however. Personnel changes created by the transfer include: **R. L. Sears,** general sales manager of Lynch, with headquarters in Anderson; **M. J. Czarnecki, Jr.,** district sales manager for Ohio, Indiana and Michigan, with offices in Toledo; **R. H. Werbe,** personal representative at the Toledo plant of **N. G. Andersson, Jr.,** vice president in charge of production for the firm, and **Armand Norris,** in charge of the company's engineering facilities; **R. E. Taggert,** research engineer for Lynch Corp. with headquarters in Anderson. Others transferred to Anderson include: **A. V. Paterson,** sales manager of the Par Compressor Div.; **M. V. Birkins** and **John Leslie,** Packaging Machinery Sales Dept.; **Rex Aumend** and **James Dooley,** Service Dept.

Alton K. Marsters has been appointed director of sales for all divisions of **Colt's Mfg. Co.,** Hartford, Conn. He succeeds **Richard S. Havourd,** who will assume other responsibilities with the company.

Samuel Tisser has joined the **Federal Latex Corp.,** Brooklyn, as general manager and assistant vice president in charge of technical sales and service. Facilities and equipment of the company are being expanded to meet increased demands for latex compounds.

John R. Boardman has been appointed Philadelphia district sales manager for the **Edwin J. Schoettle Co.,** Philadelphia. Mr. Boardman will be responsible for sales supervision in all the territory between North Jersey and Washington, D.C., and west to Pittsburgh.

St. Regis Paper Co., New York, has announced a 4½-million-dollar expansion



Better see H&D!



Our 65th Year

HINDE & DAUCH H&D



We've cut packaging costs to the bone with the *Automatic* CAMPBELL wrapper

Wraps 100 to 300 units per minute!

- CANDIES AND CONFECTIONS
- FOODS AND BAKERY PRODUCTS
- PREPACKAGED TABLE MEATS, BACON, CHOPS, PATTIES, ETC.
- ICE CREAM BARS, NOVELTIES
- CITRUS FRUITS, VEGETABLES, CHEESE, DAIRY PRODUCTS
- HARDWARE, MACHINE PARTS
- PAPER TISSUES, NAPKINS, TOWELS, AND CLOTH SPECIALTIES
- WOOD AND PLASTIC SPECIALTIES
- BANDAGES, SOAPS, DRUGS, FILM — AND 101 VARIED PRODUCTS OF REGULAR AND IRREGULAR SHAPE AND CONSISTENCY.

Faster, high speed production — Less labor and material costs are yours with the *automatic* continuous feed Campbell Wrapper. Soft, hard, solid or fragile, your products are "float" wrapped at speeds of 100 to 300 single or multiple packed units per minute — *without crush or damage!* Users report up to 50% savings in material costs, as trays or stiffeners need only be used when *desired.* And, in many cases *one person* can both operate and tend several machines at one time. Machine flexibility permits size change-over with a minimum of down-time. Your selling costs decrease too, because the uniformly neat, attractive packages from the Campbell Wrapper, actually *sell themselves!*

Check these important features

- Automatic high speed rotary motion
- "Float" wraps products of all shapes
- Uses wrap materials of all types
- Positive heat, glue or crimp sealing
- Wraps without trays or stiffeners
- Simplified, one person operation
- Multiple size change-overs



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We are contributing to the nation's defense program by providing a large part of our increased production facilities for building precision armaments. Civilian orders are filled on a reasonable time basis only.

NEW! Free booklet showing machine versatility. Write for your copy today.

Campbell WRAPPER
HUDSON-SHARP MACHINE CO. • GREEN BAY, WIS.
Manufacturers of Aniline and Gravure Presses, Folders, Interfolders, Laminators, Waxers, Embossers, Slitters, Sheeters, Roll Winders, Packaging Machines, Crepers and Tissue Converting Units.

New York Office: 55 W. 42nd St.

Plants and people

plan at the St. Regis Kraft Center in Pensacola, Fla. The program, scheduled to be completed by July, 1953, is designed to increase the flexibility of the Pensacola Kraft Center so that it can produce bleached and unbleached grades of kraft paper for a broad variety of uses.

The Package Machinery Co., Springfield, Mass., has opened a Philadelphia office at 29 Bala Ave., Bala-Cynwyd, under the management of **Thomas L. Jefferson.**


G. L. Bitting

George L. Bitting has been promoted to assistant product manager for foil, **Kaiser Aluminum & Chemical Sales, Inc.**, Oakland, Calif. Mr. Bitting, formerly foil sales representative in the company's Chicago district office, will headquarter in the Kaiser Aluminum general sales office in Chicago.

Minnesota Mining & Mfg. Co., St. Paul, Minn., has appointed **Donald Kelly** regional sales manager of its adhesives and coatings division in Dallas, Tex. Mr. Kelly joined 3M in 1949.

The opening of two new sales offices has been announced by **Standard-Knapp, Div. of Emhart Mfg. Co.**, Portland, Conn., manufacturers of automatic packaging machinery. **W. A. Schilling** will head the office at 328 Market St., Camden, N. J., and **W. E. Conklyn** will be the representative in charge at 11-13 E. 21 St., Baltimore, Md.

Shipping Utilities, St. Louis, Mo., distributor of materials-handling equipment and packaging and fastening devices, has been incorporated and the company name changed to **Shipping Utilities, Inc.**

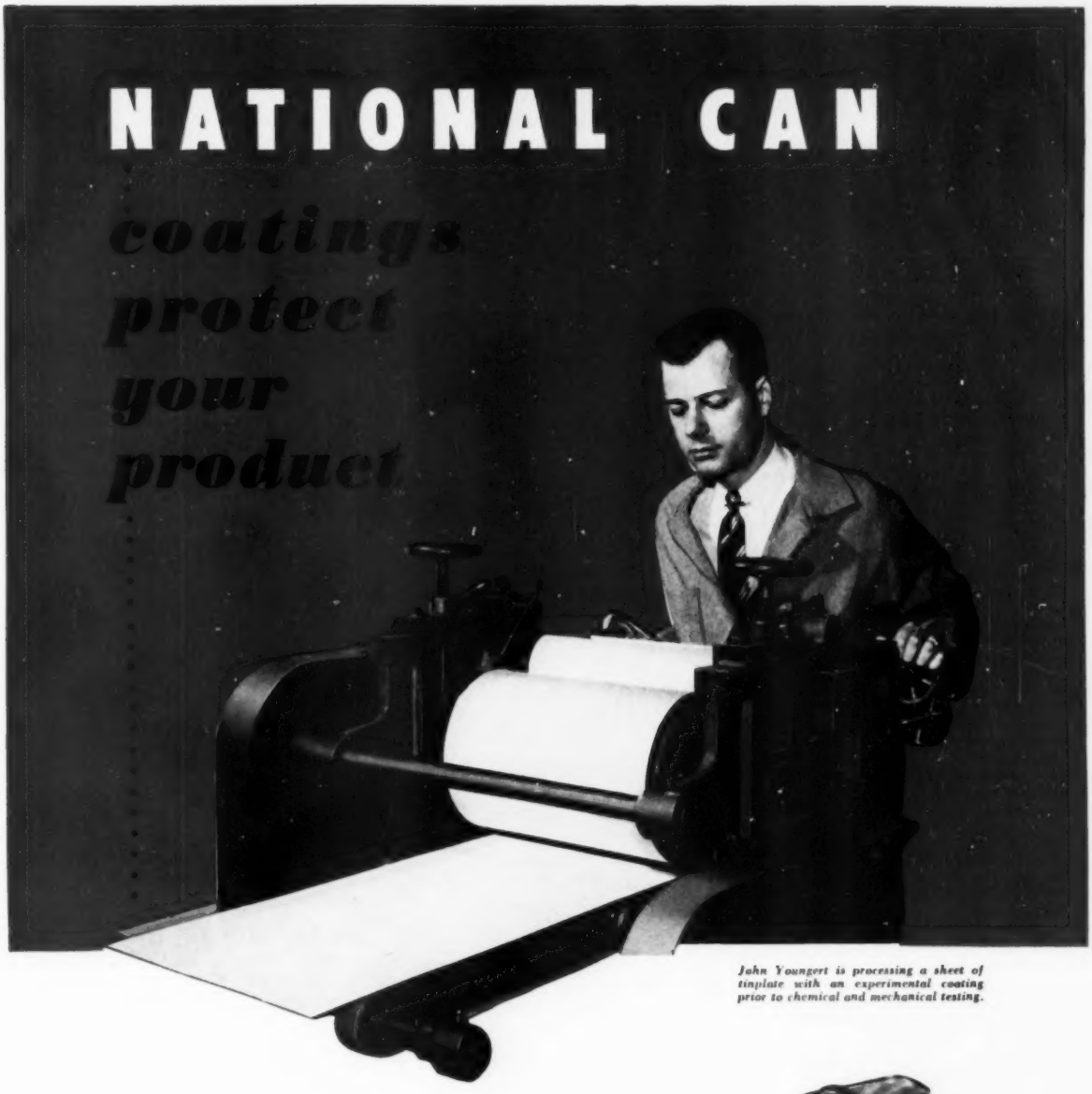
The Signode Steel Strapping Co.'s new $1,500,000 plant at Weirton, W. Va., was dedicated on Oct. 22, the 40th anniversary of the Chicago firm.

R. A. Irwin, president and general manager of **Somerville, Ltd.**, Canadian packaging, printing and lithographing firm, has announced the purchase of the assets of **Consolidated Lithograph Mfg. Co., Ltd.**, of Montreal. **R. Pierce Reid**, president and general manager of the former company, continues as general manager of the new division.

The Valentine Pulp & Paper Co., New Orleans, La., has appointed the Perkins-Goodwin Co., 30 Rockefeller Plaza, New

NATIONAL CAN

coatings protect your product



John Youngert is processing a sheet of tinplate with an experimental coating prior to chemical and mechanical testing.

Day by day—new techniques in the coating of tinplate are developed in National Can laboratories. These new coatings are subjected to exhaustive chemical and mechanical testing to assure your product optimum protection. Typical National Can service . . . where it counts!



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with EKCO-FOIL

Here are just a few of the products that sell faster in Ekco Foil. Do they suggest a use for you?

- Cream Cheese Cake
- Scrapple
- Chili Con Carne
- Spaghetti and Meat Balls
- Cod Fish Cakes
- Candied Fruits
- Chocolate Fudge
- Frozen Mixed Vegetables
- Pre-cooked Fish Sticks
- Fresh Salads



- Frozen Hors d'oeuvre
- Coffee Cakes
- Brown 'N Serve Rolls
- Assorted Chocolate Candies
- Swedish Meat Balls
- Ice Cream Pie
- Starter Plants



- Fried Fish Fillets
- Baked Salmon Loaf
- Prepared Brownie Mix
- Barbecued Beef Dinner
- Frozen Meals
- Pre-cooked Snack Tray
- Brown 'N Serve Sausage
- Upside Down Cake



- Peanut Spread
- Deep Dish Apple Cobbler
- Beef Pot Pie
- Macaroni Salad
- Premium Lard
- Frozen Fried Shrimp
- Potato Salad
- Prepared Dog Food



- Hot Cross Buns
- Hamburger Loaf
- Family Fudge Block
- Coffee Bread Mix
- Frozen Pizza Pie
- Prepared Coffee Cake
- Cheese Blintzes
- French Fried Potatoes
- Frozen Potato Puffs



- Frozen Chicken Pie
- Frozen Meat Pies
- Frozen Fruit Pies
- Roast Beef and Gravy



Look at the advantages of EKCO-FOIL

✓attractive
✓sanitary
✓taste free

EKCO PRODUCTS CO.
Chicago 39, Illinois

Plants and people

York, marketing management organization, as exclusive sales agents for all products to be produced by the new Valentine pulp and paper mill now under construction at Lockport, La., and scheduled to start operating early next year. Perkins-Goodwin has sales offices in Chicago, Lufkin, Tex., and in Stockholm, Sweden. A Boston sales office has recently been opened in the Park Square Bldg., 31 St. James Ave., with **William H. Anders** and **John Calnan** as New England representatives.

The Visking Corp. of Chicago and **Sponcel, Ltd.**, of England have announced the formation of a joint company, **Viskase, Ltd.**, to manufacture in Great Britain Visking casings for sausage and other meat products. A modern plant is being equipped at Swansea (Wales) and is expected to be ready for operation the beginning of next year.

David L. Luke, III, has been elected a vice president of the **West Virginia Pulp & Paper Co.**, New York.

Kenneth D. May has been appointed sales representative for **Western Waxed Paper Div., Crown Zellerbach Corp.**, in eastern Washington, northern Idaho, Montana, North and South Dakota, and northern Wyoming. He succeeds **W. Z. Ritchie,** who has been made sales manager at the company's North Portland, Ore., plant.

John R. Segesser has joined Western Waxed Paper as assistant superintendent, technical, of the firm's San Leandro, Calif., plant, where he will be in charge of quality control and process development.

Roy J. Gavin has been elected vice president of the **Irvington Varnish & Insulator Div. of Minnesota Mining & Mfg. Co.**, St. Paul, Minn. Mr. Gavin will move his headquarters from St. Paul to the division's home offices at Irvington, N. J.

Chauncey K. Hubbard has been named assistant to the general manager of the Container Div. of the **Jones & Laughlin Steel Corp.**, Pittsburgh, Pa., with headquarters in New York. The Container Div. manufactures steel drums and pails.

Bryant Chucking Grinder Co., manufacturer of precision machine tools and thread gauges, Springfield, Vt., has acquired the **E. G. Staude Div. of Sperry Corp.**, New York. A new corporation has been formed to be known as **E. G. Staude Mfg. Co., Inc.**, St. Paul, Minn. Officers of the new company include: **J. H. Beardsley,** president; **Samuel K. Lynn,** executive vice president and resident manager; **Paul E. Fischer,** vice president and chief engineer; and **R. W. Bowlen,** treasurer. **Kenneth Slawson,** former Staude general manager, will return to Sperry.

Ernest W. Halbach has resigned as plant manager of the **Celluplastic Corp.**, Newark, N. J. **Anthony Nichols** succeeds Mr. Halbach.

The National Assn. of Manufacturers has presented the **Robert Gair Co., Inc.**, New York, with a plaque on the occasion of the company's 25th year as a NAM member. The presentation was made by **H. E. Humphreys,** president of U. S. Rubber



W. Howell (left) accepts NAM plaque from H. E. Humphreys

Co., and New York regional vice president of the National Assn. of Manufacturers, to **Wilbur Howell,** secretary at Gair.

Inta-Rota Machine Co., Richmond, Va., manufacturer of glue mounting, laminating, coloring and coating machines, has completed a modern building on its plant site at Byrd Airport, Richmond. Manufacturing facilities, drafting rooms and offices are housed in this new building, the first of several which will be erected on the site.

Maywood Glass Co., Los Angeles, subsidiary of **Anchor Hocking Glass Corp.**, Lancaster, Ohio, has completed construction of a new plant for decorating glass containers with fused colors. The new building is located on property adjacent to the company's glass factory. Operation of the decorating plant, as well as the glass plant, is under the supervision of **Howard V. Fulton,** vice president and general manager.

Chase Bag Co., Chicago, has appointed **W. J. Muller** manager of the Orlando sales office. Mr. Muller has been with the firm since 1927. **Ralph Farnham,** former manager of the Orlando office, has been transferred to the promotion department, where he will devote full time to the Saxolin open-mesh and polyethylene bag



The [illegible] Packaging Development of the Century!

Ekco-Foil, the wonderful new preshaped aluminum foil package, offers advantages no other packaging material can duplicate! You can prepare your product in Ekco-Foil . . . freeze or refrigerate it in Ekco-Foil . . . then sell it in the same attractive Ekco-Foil package. Labor costs go way down . . . and sales go way up! Your bright silver Ekco-Foil package promises quality and convenience to Mrs. Consumer. She just reheats and serves your product right in its Ekco-Foil package. And she can reuse the package too!

Ekco-Foil makes it practical for you to take advantage of this new packaging material right now, because Ekco-Foil is available for immediate delivery in every size and shape you need! Only Ekco has a complete selection! Only Ekco can make your foil pan-packages in any quantity!

Ekco-Foil has never failed to raise sales for any product. Why not see what it can do for you!

VALUABLE COUPON

MP-11

EKCO Products Company, Industrial Foil Division
1949 N. Cicero Avenue, Chicago 39, Illinois

( ) Please send Bulletin and samples.
( ) Please have representative call.

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CITY_____ ZONE____ STATE_____

We are interested in Ekco-Foil for packaging_____
please list products

EKCO PRODUCTS COMPANY
1949 N. Cicero Avenue
Chicago 39, Ill.
Also Available From Ekco Products Company (Canada) Ltd., Toronto

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Why settle for less than the best?

Bondmaster ADHESIVES

"Truly Master Products" for easy application and positive bonding of

CELLOPHANE
FOIL
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POLYETHYLENE
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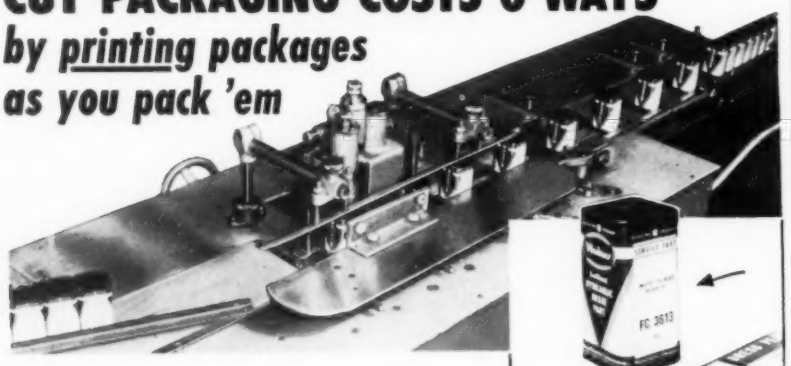
If you look for performance and quality . . . if you look for economy too . . . you can end your search with **Bondmaster** Adhesives. For over forty years, leading laminators have been using **Bondmaster** stock formulations for their routine production, and custom-made adhesives, developed in our laboratories, to meet their problems with new materials.

May we send you technical data on Bondmaster Adhesives for your application?

Rubber and Asbestos Corporation
233 Belleville Ave., Bloomfield, N. J.

R&A RUBBER ADHESIVES SINCE 1913

CUT PACKAGING COSTS 6 WAYS
by printing packages as you pack 'em



If you make more than one product—or your product comes in different colors, sizes, flavors, etc.—the Gottscho MARKOCODER will save you money. This is the machine that enables you to use a common package for your whole line by printing names, numbers, other product identification on one or more blank panels of partially-printed cartons, boxes, cans, canisters, jars, etc. . . . automatically, as part of the packaging operation. Consequently, it slashes package inventories . . . reduces labor costs . . . cuts unit package costs . . . prevents down-time on the line . . . eliminates loss from obsolescence . . . simplifies inventory control.

Write for descriptive MARKOCODER brochure today

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ADOLPH GOTTSCHO, INC.
Hillside 5, N. J.

50TH YEAR

Plants and people

promotion. **James F. Porter** has been made manager of Chase Bag's Toledo plant, which produces multiwall paper bags, flour, potato and other small bags and sugar pockets.

The promotion of **J. B. Trigg** to sales manager of Chase Bag's Buffalo branch has been announced.

Plans for a new paper specialty plant, to be built at Crossett, Ark., have been announced by **Bemis Bro. Bag Co.**, St. Louis, Mo. The new Crossett plant will manufacture kraft paper specialty products for packaging odd-sized objects.


H. E. Illich

H. Erich Illich has joined **Herb-Shelley, Inc.**, Farmington, Minn., as vice president in charge of manufacturing. Mr. Illich, former assistant sales manager in charge of the Plastic Bag Dept. of Bemis Bro. Bag Co., will also direct purchasing for Herb-Shelley, Inc., in his new position.

Container Corp. of America, Chicago, has appointed **Philip M. Goodrich** as sales manager and **Richard C. Winkler** as plant manager of the company's Boston corrugated container plant. **Stanley L. Oberg** has been made general manager of the company's Rock Island container plant and **William C. Alleman** has been named sales manager of the Fort Worth container plant. **George R. Sutch, Jr.**, has been appointed as plant manager, folding cartons, at the Manayunk, Philadelphia, property, while **George H. Sabol** has been made plant manager of the new Valley Forge folding-carton plant at Oaks, Pa. **Neven R. Rauch, William B. Groff** and **Marvin L. Shelton** have been named general managers of corrugated-shipping-container plants at Boston, Cleveland and Fort Worth, respectively. **Everett G. Temple, Marshall P. Fox** and **Jean R. Neil** have been named general managers of the folding-carton plants in these locations.

Clarence F. Brown, special assistant to the director of sales of the Film Dept., **E. I. du Pont de Nemours & Co., Inc.**, Wilmington, Del., has retired after nearly 34 years with the company. Mr. Brown joined Du Pont in 1919 as director of the Advertising Div. and has served the company in a variety of capacities.

Du Pont is assembling a collection of the best examples of European glass packages to keep American bottlers and other glass-container users informed of the lat-



"Reach" magnetism

Getting consumers to reach for your product is the key to superior merchandising. Frequently, the deciding factor is your package. Let Old Dominion help give your package more "reach" magnetism. A complete idea team supported by unexcelled box making facilities is at your command. Example: The handsome Sunbeam Electric Blanket box with acetate window to feature the electric controls as well as the blanket itself.

OLD DOMINION Box Company Inc.

PLANTS LOCATED THROUGHOUT THE SOUTH
Executive Offices: LYNCHBURG, VA. • *Sales Offices:* CHARLOTTE, N. C.

THE SOUTHERN BOX MAKER WITH A NATIONAL REPUTATION

FACTS AND FIGURES ABOUT

LABEL FINISHING...



Let's honestly assess the cost of

PYROXCOTE

FINE LABEL COATINGS

as compared to ordinary label finishes

Pyroxcote modified alkyd paper varnishes are noted for their deep lustrous brilliance, abrasion resistance, water and frost shedding properties. Do you realize how little more they cost than spirit varnish?

One such coating is Pyroxcote No. 35-275,—contains 50 per cent non-volatile, weighs 8.25 pounds per gallon, and lays down a finish at 52 cents per pound. With good litho paper, this means a cost for coating of less than $1.00 per 1,000 sq. ft. At this price, can you afford just "any old finish" on your labels, wraps, catalog covers, etc.?

There are dozens of Pyroxcote paper finishes—some moistureproof, others heat sealing, greaseproof, or just plain beautiful to behold! Let us discuss your needs.

WICHITA KANSAS

PYROXYLIN PRODUCTS, Inc.
CHICAGO 32

PAOLI PENNA.

Plants and people

est developments in European package designing. When the collection is completed, it will be displayed at trade shows and conventions. **N. V. Spruyt Co.**, Antwerp, Belgium, packaging consultants and designers, are selecting samples for the collection.

Willard J. Flint has been named products sales manager for steel containers of **Continental Can Co.**, New York. Mr. Flint formerly was general sales manager of the Steel Shipping Container Div. of Geuder, Paeschke & Frey Co. and has been active in this field for over 17 years.



W. J. Flint

In a move to enlarge its Metal Div. operations in the Florida citrus area, Continental has begun construction of a new building in Winter Haven to house its present Tampa district sales office. The new building, a one-story structure covering 3,300 sq. ft. of floor space, is expected to be completed next month.



L. K. Hanson

P. C. Myers has been named sales manager of the New England district of Continental's Fibre Drum Div. Mr. Myers succeeds **C. B. Pearsall** who retired from Continental recently.

L. K. Hanson has been made general manager of Continental's Overseas Div. He will handle the foreign activities for Continental from the company's head office in New York.

W. T. Blackburn is now manager of the Corrugated Division of **Continental Box Co.**, Houston, Tex., a subsidiary of the **General Box Co.**, Des Plaines, Ill. Mr. Blackburn will have charge of all sales and production of corrugated containers. Work is being rushed on new buildings and the purchase of additional corrugated-box manufacturing equipment to improve and modernize the plant's facilities.

Dr. Louis C. Barail, consulting bio-chemist and toxicologist, has been appointed vice president of **Ekroth Laboratories, Inc.**, Brooklyn, N Y. Dr. Barail will be in charge of research and promotion.

National Folding Box Co., Inc., New Haven, Conn., has elected **F. S. Symington** chairman of the board and **W. C. Palmer** president. **Walton D. Lynch** has



Let's talk turkey about Olive Cans



The Thanksgiving season is a particularly appropriate time for talking turkey about lithographed containers.

With the wide range available, experienced users know they get the finest balance of fine quality and low prices with lithographed metal containers—round or square, tall or short—manufactured by Olive Can Company.

For more than forty years, Olive Can Company has led the field. Our highly decorative, highly utilitarian containers are used for such varying products as soaps, waxes and oils, candies, baked goods, chemicals.

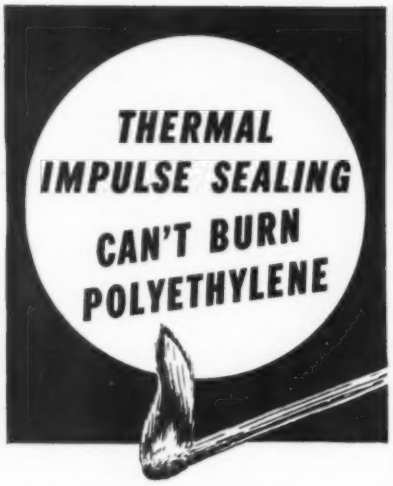
Quite possibly, the attractive appearance, the *protective* all-metal construction of Olive Cans will prove beneficial to your sales. Ask for samples suitable for your products.

CONSTRUCTION • LITHOGRAPHY • SERVICE
DESIGN • PRICE

Quality **OLIVE CAN COMPANY** *Service*

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METAL CONTAINERS



Vertrod's Thermal Impulse
Heat Sealing Machine

. . . never reaches a temperature that will burn the material

. . . seals are unaffected by variations in material thickness, humidity, or length of dwell

Vertrod
THERMAL IMPULSE*

EXACT UNIFORMITY
TEAR RESISTANT
SEALS POLYETHYLENE, PLIOFILM AND OTHER FILMS RIGHT THROUGH LIQUIDS AND POWDERS

- Electronically controlled seals
- Extreme versatility. All non-metallic barrier materials to .006"
- Seals are cooled under pressure. Cold heater bars
- Simple dial control of time cycle
- No skill required, no warm-up needed. Always ready to seal
- Seals plain and gusseted bags and wrinkled material
- Models 9" to 42". Extremely low priced
- Machines developed to meet your requirements for sealing and fabricating special shapes

See For Yourself!

Write for specimen polyethylene seals made by Vertrod or send samples of your own material.

* Patented process manufactured under one or more of the following patents: 2,460,460; 2,509,439; 2,574,094; 2,574,095

Vertrod Corp.

17 Williams Avenue Brooklyn 7, N. Y.
WEST COAST PLASTIC DISTRIBUTORS
4113 W. Jefferson Blvd. Los Angeles, Calif.

Plants and people

resigned as chairman of the board, but will continue as a director. Five new directors have also been elected to the company's board.

Foil Kraft, Inc., Los Angeles, manufacturer of aluminum-foil food containers and trays, has opened a new plant in Chicago. **Jack Moore** of Foil Kraft's West Coast office is being transferred to Chicago as Midwest sales manager. **H. A. Kittell** will be the new West Coast sales manager.

Logan W. Mather has been promoted to the position of chemist in the technical department of **The Gardner Board & Carton Co.,** Middletown, Ohio, manufacturers of paperboard, cartons and retail boxes. Mr. Mather joined the company in 1942.

Geuder, Paeschke & Frey Co., Milwaukee, Wis., has promoted **A. Neil Savee** to sales manager of the Steel Package Div., which manufactures small steel shipping containers. Mr. Savee joined the company in 1936.

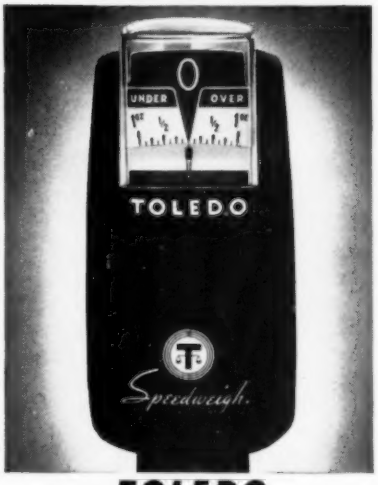
The firm of **Harwell, Knowles & Associates,** supermarket management consultants, has been established at 6824 Main St., Jacksonville, Fla. A major part of the company's services will deal with packaging functions in retail meat and produce operations. A research program will be directed toward improving wrapping materials, wrapping methods and the related equipment and layout. In addition, the organization will scientifically evaluate new retail-store packaging equipment as it appears on the market.

Hubbs & Howe Co., Buffalo, N. Y., distributor of wrapping and fine papers, has appointed **David J. Laub** as vice president for sales and operations.

Krafco Container Corp., Dallas, Tex., has purchased a majority of the outstanding stock of **Saginaw Corrugated Box Co.,** Saginaw, Mich. Saginaw Corrugated has been re-organized as **Krafco Container Corp. of Michigan** and will operate as a subsidiary of Krafco, manufacturing corrugated boxes from Fourdrinier kraft board produced at Krafco's West Monroe, La., plant. All present Saginaw personnel will be retained.

Fulton Bag & Cotton Mills, Atlanta, Ga., have begun construction of a million-dollar plant at New Orleans to produce new burlap and cotton bags, open-mesh produce bags, multiwall paper bags and

NEW SPEED
for OVER-UNDER WEIGHING



TOLEDO SPEEDWEIGH®
3 SIZES

It's FAST . . . it's ACCURATE . . . for check weighing, packaging. 3 sizes —to 5 lb., to 20 lb., to 50 lb.! Shadow-free wide-angle reading . . . accurate to 1/64 of an ounce . . . *exclusive* "coined" bearings for greater accuracy, longer life . . . stainless steel beam . . . enclosed levers . . . choice of platters and scoops. Write for bulletin 1416. Toledo Scale Co., Toledo 1, Ohio.



TOLEDO®
Headquarters for
SCALES

Re-designed vinegar bottle does double duty



RECOGNIZE THIS BOTTLE?
It's a vinegar bottle, all right—
but whose? Like all stock designs, it
gives no clue to brand identity.
That's one reason the packer de-
cided on re-design. He also wanted to
solve labeling and filling problems
presented by the paneled sides
and narrow mouth. If a re-use could
be built in, so much the better.
That was the problem turned
over to Armstrong's designers.



THIS NEW BOTTLE was the answer.
The wide mouth fills faster, and the
broad sides are easier to label.
It takes less room on the shelf,
and the 63 mm. cap has plenty
of space for price marking.

Its biggest advantage, however, is its re-
use value. It's handy for all kinds of
mixing jobs: baby's formula, fruit juices,
salad dressing. Ounce graduations
are blown into the glass, and the
shoulders are tapered for easy pouring.

ARMSTRONG'S GLASS CONTAINERS

Might re-design help your container?
We'll be glad to offer suggestions. For details,
call your nearest Armstrong office or write
Armstrong Cork Company, Glass and Closure Div.,
5411 Crystal Street, Lancaster, Pennsylvania.



- New easy-to-operate handwheels for quick simple carton size adjustments
- New *positive* carton timer for uniform carton feed
- New self-retiming flap tucker

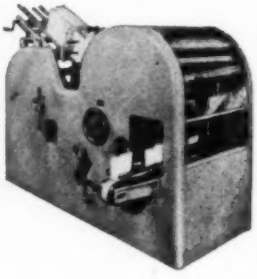
Presenting the NEW "1954" model Peters CCY Carton Folding and Closing Machine

Now this proven packaging machine is made even better!

Three improvements on this Peters Model CCY and CCY-L Carton Folding & Closing machine make it more efficient and faster than ever. Efficiency is increased with a new *positive* carton timer that eliminates carton jamming. Also, a new self-retiming flap tucker increases tucking efficiency . . . and increases machine speed to 120 cartons or more per minute. Now you can change from one carton size to another in record time, too. Handwheel adjustments do the trick!

Complete Your High-Speed Packaging Line with this Model SE Forming & Lining Machine

New Model SE forms and lines top-opening cartons at speeds of 120 or more cartons per minute. Be sure to ask about Model SE details when you investigate the improved Model CCY.



Peters Machinery Company
4712 Ravenswood Avenue
Chicago 40, Illinois

Plants and people

small paper pockets for sugar and rice, plus a complete line of canvas articles. Used bags will be processed as well as bagging for wrapping cotton. Facilities will also include equipment for laminating textiles with paper and for mildew-proofing. When completed, the building will replace Fulton's present operations at 1100 and 1300 S. Peters St.

The American Paper Products Co., Philadelphia, has started construction of a $125,000 building on land adjacent to the site of its paper-mill operations in Waltham, Mass. The new building will house facilities for converting paperboard into tubes and cores used by textile mills in winding fabrics and also for making paper containers for mailing purposes.

Col. John D. Peterman has assumed command of the **Quartermaster Food and Container Institute for the Armed Forces** at the Chicago Quartermaster Depot. He succeeds **Lt. Col. George F. McAneny**, who has headed the Institute since January of this year and who now becomes assistant commandant.



W. B. Dierking

The Dobeckmun Co., Cleveland, Ohio, has appointed **Warren B. Dierking** assistant sales manager of the Packaging Div., with the special function of coordinating packaging machinery information. Mr. Dierking, who has been with Dobeckmun's Packaging Div. for 15 years, will headquarter in Cleveland.

Sinclair Refining Co., New York, has established a new marketing division called the Process Materials Div., to handle sales of waxes, petrolatums, resins, industrial asphalts and other petroleum products sold as materials for processing or further manufacture. **Harold E. Bryson**, former manager of the Wax and Petrolatum Div., is manager of the new division, with headquarters in New York. The functions of the Wax and Petrolatum Div. will be absorbed by the new division.

For developing packaging methods that helped the Armed Forces save millions of dollars, the **U. S. Forest Products Laboratory Div. of Materiel Containers** has received a U.S.D.A. Unit Superior Service Award. The Laboratory is a research unit of the Forest Service, U.S. Dept. of Agriculture. **L. J. Markwardt**, assistant director of the laboratory, presented a plaque



this *Durethene* POLYETHYLENE Carton Liner could

REVOLUTIONIZE

Your Packaging Costs!

IT'S NO EXAGGERATION . . . many firms who have until now been forced to use expensive steel drums or pails, and to put up with high freight charges because of excessive package weight, are already reaping amazing dividends in lower costs all along the line—by switching to standard fibre shipping cartons equipped with *Durethene* Polyethylene Film Liners.

Polyethylene Liner Film, made by the most modern processes and to the most rigid specifications in our two large plants, has *high tensile strength* . . is impervious to moisture . . *won't crack, split or tear* . . is *inert* to most chemicals . . holds products safely with *no leaking or sifting.*

Besides costing less, *Durethene*-lined fibre cartons are easier to store before use; easier to handle in shipping and storage after packing. There is no recovery nuisance and expense. There are no filling problems. Corrosion and contamination of products is impossible.

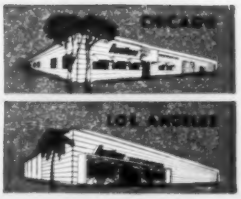
If you are now using a less modern type of liner material, a change to *Durethene* Polyethylene will free you from sticking, tearing or contamination problems.

Make your own check-up on the great savings-potential for *your* products. We'll be glad to supply working samples of *Durethene,* and to work closely (and without obligation) with you, your carton source and a progressive *Durethene* converter in your area, in developing exactly the right package for your needs. Write or phone us today!

DURETHENE FILM LINERS FOR MULTI-WALL BAGS are doing a remarkable job of protecting well-known products against moisture gain or loss, contamination, sifting.



- **DURETHENE Polyethylene Film is also widely used by major packagers everywhere for consumer-packaging such products as *PRODUCE ★ POULTRY ★ FROZEN FOODS ★ POPCORN ★ CANDY ★ SOAP CHEMICALS ★ TEXTILES ★ COSMETICS ★ LEATHER GOODS ★ SPECIALTIES***



Durethene CORPORATION

Manufacturers of Polyethylene Film for Converters

1839 SOUTH 55TH AVENUE, CHICAGO 50, ILLINOIS • OLYMPIC 2-1600

WEST COAST FACTORY: 5600 W. ARBOR VITAE ST., LOS ANGELES 45, CALIF. • OREGON 8-4969

• *Sales Offices in Principal Cities*

PAPER, PLASTIC CONVERTERS! PACKAGE MANUFACTURERS!

These NEW Machines can help give you BIG SAVINGS INCREASED PRODUCTION!

NEW AUTOMATIC PRODUCTION CUTTER



Automatically feeds, controls, measures, and cuts soft "in-process" materials to uniform sheet sizes! Designed for easy handling of paper, plastic, cloth, etc. up to 60" wide from extruders, laminators, "in-process" operations, or from rolls and sheets. Uses electronic measuring device and precise controls for accurate, low cost operations. Processes material at rate of 10 to 100 feet a minute, depending on length of cut. New slitting attachment and special feeding and take-away devices are available for *any* production set-up.

NEW STRONG SEMI-AUTOMATIC LABEL CUTTER



Cuts labels, tickets, display cards, etc. *directly from the sheet.* This unique machine, long-used in England and Europe, is now available to U. S. manufacturers. It eliminates extra operation of cutting sheets into squares before die cutting. Fast, accurate, easy to operate!

NEW JACQUES SLITTER & REWINDER (not shown)

Handles soft materials up to 60" wide. This larger model slitter and rewinder was designed for more effective slitting of wide materials usually difficult to handle. Shear type, contact type, and razor blade cutters available.

Ask about our complete line of HAND-OPERATED CUTTERS for faster, easier cutting of soft materials up to 10 ft. wide.

NEW Hobbs "Alquist" Winder winds materials at constant tension!

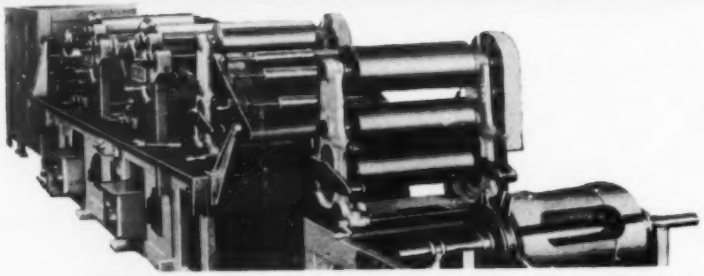


SETS a new standard for winding all types of materials! Tension is kept constant electrically throughout winding operation. Features much greater efficiency and accuracy.

HOBBS MANUFACTURING CO., 27 SALISBURY ST., WORCESTER 5, MASS.
EST. 1883

Write for details about each machine!
Chicago office at 549 West Washington Blvd.

A GOOD PRESS + GOOD PLATES = GOOD PRINTING



The CHAMPLAIN Flexographic Press

performs at its best with MOSSTYPES®

...the pre-madeready rubber printing plates

The finest engines run at peak efficiency only with the right fuel. It's the same with flexographic printing equipment, too — for top-quality performance you have to team a precision-engineered press with precision-molded printing plates. That's why most leading makers check out their new presses with MOSSTYPES, the rubber plates you can always depend on for accuracy and uniformity.

Write for literature about MOSSTYPE Rubber Plates

MOSSTYPE CORPORATION
33 Flatbush Avenue · Brooklyn 17, N. Y.

RUBBER PLATES MOSSTYPE DESIGN ROLLERS

Plants and people

engraved with the citation to **Kenneth W. Kruger**, chief of the Div. of Materiel Containers at an awards ceremony at the Laboratory.

E. W. Bliss Co., Canton, Ohio, has appointed **Howard K. Segerlind** to its can-machinery sales office in New York.

Rexford Paper Co., Milwaukee, Wis., has completed construction of a modern building for the production of Redcore gummed tapes, box tapes and water-tight papers. The new plant occupies approximately 75,000 sq. ft. on a 14-acre tract.

Raymond E. Stearns has been appointed assistant general manager of the **United Board & Carton Corp.** and will headquarter in the firm's general offices in New York. Mr. Stearns will supervise purchasing, traffic, personnel, carton and paperboard manufacturing, and the financial departments of the company.

Robert Gair Co., Inc., New York, manufacturer of folding cartons, paperboard and shipping containers, has appointed **William H. Nenstiel** as West Coast sales representative for all types of Gair folding cartons, with particular emphasis on specialties. Mr. Nenstiel's office is at 385 E. Green St., Pasadena 1, Calif. **Francis J. Sullivan** has been made a special sales representative for Gair's container division. Mr. Sullivan was formerly with Ottawa River Paper Co.



W. H. Nenstiel

The bronze "Oscar of Industry" trophy was presented to the Robert Gair Co., Inc., at the recent annual awards banquet held by *Financial World* magazine. The Gair company was judged to have the best annual report in the paperboard container industry, marking the seventh time the firm has won awards in this survey.

Plas-Ties Co., Santa Ana, Calif., makers of wirecord plastic packages and bag tie closures, has appointed **Fred R. Summers Co.**, Los Angeles, as their representative for California, Arizona, Idaho and Utah. Mr. Summers' activities for Plas-Ties will be confined to the packaging field.

Arthur T. Safford, Jr., has been appointed manager of sales of the **Olin Cellophane Div., Ecusta Paper Corp.**, subsidiary of **Olin Industries, Inc.**, New York. Mr. Safford, former assistant to the general manager of the Olin Cellophane Div., came

Why not

give your Pressurized Product these Big Selling Advantages?

You'll agree that the aerosol package that's

- Styled to the product
- Continues to dispense without sticking or gumming-up
- Stays clear of corrosion
- Doesn't drip, leak or puff after use

is bound to win firm friends for the product that comes in it.

Now — from your standpoint as the product manufacturer, add

- Spray pattern control
- Filling through the valve without need of expensive refrigeration*
- Adaptability to dispense *spray or foam* . . .

. . . and you've summed up some of the invaluable advantages you get in

Pres-O *the original cosmetic* ***Aerosol Valve***

the valve that has satisfied **MILLIONS** *of users!*

* *Pres-O permits pressure or refrigeration filling, as preferred.*



Another famous package recently added to the fast-growing list of Pres-O users

Three great **Pres-O** TOPS bring an enthusiastic "OKAY" from users



TILT-TOP

for shaving cream, whipped cream and other foam products



TOUCH-TOP

for perfumes, hair lacquers, paints, insecticides—for anything that's sprayable



TWIS-TOP

for spray *or* foam. Unit construction. Nothing to become lost. A twist opens or locks it.

Product manufacturers who have looked into it agree that nothing else can match Pres-O. So — why not give *your* product these added selling advantages? Better investigate NOW!

OIL EQUIPMENT
Laboratories, Inc.
Bridge Street • Elizabeth, N. J.

Keep Food Products CLEAN and DRY



with...

SEAL-SPOUTS*



—the aluminum pouring spouts for better packaging of free-flowing products.

Your package is designed to do a great job of protection up to the point of opening for use. What then?

Dampness, dust, infestation can enter through torn tops. For full protection until the package is empty add SEAL-SPOUTS. They also guard against spillage. **CUSTOMERS PREFER PACKAGES WITH SPOUTS.**

SEAL-SPOUT Packages are—

EASY TO OPEN AND POUR
EASY TO CLOSE AND STORE

—and SEAL-SPOUTS can be applied right in your production line.

T. M. Reg. U. S. Pat. Off.

SEAL SPOUT Corp. 1934

363 Jelliff Ave., Newark 8, N. J.

Plants and people

to Olin in 1949 as a consultant to **Dr. Fred Olsen,** director of the research and development department. After Olin acquired the **Harwid Co.,** manufacturer of polyethylene, Mr. Safford became Harwid vice president and chairman of the board.

The T. C. Wheaton Co., Millville, N. J., has appionted **Ralph B. Wentzel** to the newly created post of vice president in charge of sales. He will be responsible for the sale of all Wheaton glass products. Succeeding Mr. Wentzel as sales manager of the Drug & Chemical Container Div. is **Walter F. Gavigan,** manager of the Tubing & Tubing Products Div., which has been absorbed by the Drug & Chemical Container Div. **Herbert H. Mills** has been promoted to a vice presidency in the company. Succeeding Mr. Mills as sales manager of the Cosmetic Container Div. is **Robert M. Roemer,** who will headquarter at Wheaton's home offices in Millville.

Roy Bensing, one of the founders of **Bensing Bros. & Deeney,** Philadelphia, makers of printing inks, died on Sept. 27 after a brief illness. He was 56 years old. In the ink business for 42 years, Mr. Bensing, together with his brothers, Harold and the late Earle Bensing, and James J. Deeney, formed Bensing Bros. & Deeney in 1936.

Phillip Papin, vice president and general manager of the **Rossotti California Lithograph Corp.,** San Francisco, died of a heart attack on Sept. 3. He was 46 years of age. Mr. Papin was widely known in the food field, having been influential in the design and manufacture of many nationally known food labels and cartons.

G. A. Fleischer, vice president of the **Congress Paper Box Co.,** Chicago, died at the Henrotin Hospital on Sept. 8 at the age of 90. Mr. Fleischer had been in the box-making industry 57 years.

Henry M. Donahue, divisional sales manager of the **McLaurin-Jones Co.,** Brookfield, Mass., died on Sept. 3. Mr. Donahue had been an employee of the company for 39 years, having joined the sales department in 1914. Recognized as an authority on paper problems, he was a member of the Pyroxylin Group of the Coated & Processed Paper Assn., the Boston Paper Trade Assn. and other business organizations.



AMERICA'S *finest* PAPER BAGS CARRY THIS MANUFACTURER'S LABEL

A.B.P. CORP.

These modern packages have maximum eye and sales appeal. They represent just a few AMERICAN bags designed and produced for leading food and specialty processors and packers.

☆ AMERICAN bags are manufactured in volume on modern automatic equipment that keeps quality *up* and prices *down.*

We will be glad to submit ideas, samples and prices on your own paper bag requirements.

YOUR INQUIRY IS INVITED

WE ALSO MANUFACTURE

Kard-O-Pak — another quality bag with many exclusive features.

The PAPER BAG with "VACUUM FRESHNESS"

KARD-O-PAK gives paper bag cost and versatility plus vacuum freshness. Made with a heat-sealable, plastic interliner that LOCKS IN freshness, flavor, aroma. LOCKS OUT moisture, air, odors. KARD-O-PAK is the featured QUALITY BAG of many leading food and specialty packers.

AMERICAN BAG AND PAPER CORP., Water and South Sts., Phila. 47, Pa.

For your information

Robert T. Foreman of R. A. Jones & Co., Inc., has been elected president of the **Packaging Machinery Mfrs. Institute** for the coming year. He succeeds **Edwin H. Schmitz** of Standard-Knapp. Other officers elected at the Institute's recent 21st annual meeting are: **Mrs. Helen Horix Fairbanks** of the Horix Mfg. Co. and **Tom Miller** of the Package Machinery Co., vice presidents. Three new directors were elected: **Horace C. Baker,** Hudson-Sharp Machine Co.; **W. B. Bronander, Jr.,** Scandia Mfg. Co.; **Mills W. Waggoner,** Better Packages, Inc. Adoption of a PMMI insignia to be used by members on their stationery and other literature was formally announced and displayed at the meeting.



R. T. Foreman

The Society for Advancement of Management is now distributing the second edition of a Glossary of Terms used in Methods, Time Study and Wage Incentives, said to be an authentic reference for both management and unions alike. The 4-by-9-in. publication contains 332 definitions as developed by 93 management leaders of the society, based on their interpretation by a number of people experienced in using the terms professionally. Copies, priced at $1 each, may be ordered from the society, 74 Fifth Ave., New York 11.

The Tin Research Institute, Inc., has published a 16-page "Report of the Tin Research Institute for 1952," a 16-page booklet on the group's activities during the past year. An increase in contributions, agreed upon by the tin producers who provide funds for the Institute's activities, has enabled the organization to increase its free technical services to industry in the tin-consuming countries throughout the world. Following this additional grant, information centers were opened in Canada, France, Italy and Sweden. The Institute's headquarters and laboratories have been at Greenford, Middlesex, England, since 1938. The report points out a number of current applications of tin which originated from research at the Institute. Copies of the publication may be had on request to the Tin Research Institute, Inc., 429 W. Sixth Ave., Columbus 1, Ohio.

The fourth edition of "Ports of the World" a 47-page illustrated book designed as a service to exporters, has been published by **The Insurance Co. of North America.** This newest edition is now available to foreign traders upon request through the company's agents and through brokers. The book contains the latest information on conditions in 135 ports throughout the world and also deals with the problem of unnecessary losses. It contains information on loss-prevention procedures such as proper packaging and crating, the proper marking of shipments, including a chart showing the basic marking terms in seven different languages, and instructions on how to make shipments pilferproof.

Information about the properties, test values, molding techniques and applications of Bakelite phenolic plastics is presented in a new booklet published by **Bakelite Co., a Division of Union Carbide & Carbon Corp.** The 20-page illustrated booklet, titled "Bakelite Phenolic Molding Plastics," contains data on five types of Bakelite phenolic molding plastics and a property data table listing the values of each type of phenolic when subjected to 24 different tests. Copies of the booklet (M-1) may be had on request to the Bakelite Co., 300 Madison Ave., New York 17.

A new brochure titled **"The Copyright Office of the United States,"** explaining the place that organization occupies under the copyright law and the services it renders, as well as a partial list of its publications, is now available on request to the Register of Copyrights, Library of Congress, Washington 25, D. C.

In a project sponsored by the **Meyercord Co.,** the **Armour Research Foundation** of the **Illinois Institute of Technology** has developed a new technique for rapid drying of protective and decorative coatings of inks, paints and varnishes. The process, called Chem-Dry, is said to shorten drying time on coated products from 24 hrs. to from 2 to 20 seconds. Meyercord reports the process is now available to industry. This process hardens coatings of drying oils and resins without the use of heat. It is based on a chemical reaction between the applied coatings and sulfur dichloride vapor instead of the commonly accepted polymerization or oxidation. The process was originally designed to be used exclusively in printing. **C. E. Thorp** and **L. C. Kinney** of the Foundation's chemistry and chemical engineering department conceived the idea two years ago. The Foundation later abandoned the project and Meyercord Co. agreed to sponsor research in new applications. Ensuing research developed a process applicable in the metal, wood, glass and fabric industries, in addition to graphic arts.

The following officers were elected at the recent annual meeting of the **Western Packaging Assn.** in San Francisco; **Hugh W. Hicks,** Marathon Corp., president; **Thomas E. Bruffy,** The Dobeckmun Co., president elect; **Charles E. Jones,** Western Package Products Co., vice president; **Kenneth K. Dean,** *Good Packaging,* secretary; **Francis R. Loetterle,** National Starch Products, Inc., treasurer. Named to the board of directors are: **Thomas F. Cass,** Container Corp. of America; **O. D. Carlson,** Shellmar-Betner Div., Continental Can Co.; **Spencer Tilden,** Arabol Mfg. Co. **Peter D. Bowley** of Peter D. Bowley

What's doing

Nov. 9-12—**American Bottlers of Carbonated Beverages** (in conjunction with **1953 International Soft Drink Industry Exposition**), 35th annual convention, International Amphitheatre, Chicago.

Nov. 13-14 — **Eastern Frosted Foods Assn. Conference,** Waldorf-Astoria, New York.

Nov. 13-18—**National Assn. of Display Industries,** New Yorker Hotel, New York.

Nov. 15-19—**National Licensed Beverage Assn.,** Traymore, Atlantic City.

Nov. 18-21—**Envelope Mfrs. Assn. of America,** Edgewater Beach, Chicago.

Nov. 30-Dec. 5—**Chemical Industries,** 24th exposition, Commercial Museum and Convention Hall, Philadelphia.

Dec. 2-4—**National Assn. of Manufacturers of U. S.,** Waldorf-Astoria, New York.

Dec. 3-4—**The Society of the Plastics Industry, Inc.,** 5th Film, Sheeting and Coated Fabrics Div. Conference, Commodore Hotel, New York.

Dec. 3-5—**Southern Frozen Food Distributors Assn.,** annual meeting, Miami Beach.

Dec. 7-9—**American Pharmaceutical Mfrs. Assn.,** New Yorker Hotel, New York.

Dec. 9—**Toilet Goods Assn.,** Scientific Section, winter meeting, Waldorf-Astoria Hotel, New York.

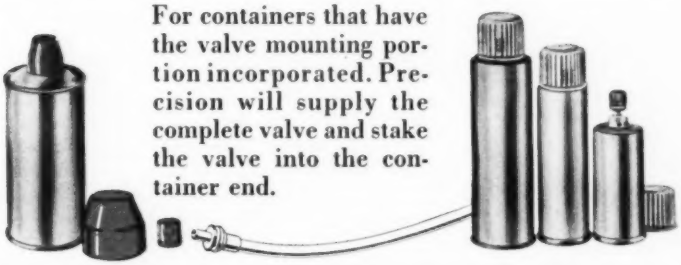
THE *Aerosol Valve* FOR YOUR PRODUCT *by Precision*



Complete assembled cup type valve for any one inch opening aerosol container. For all aerosol products. Protective domes offered in various colors.



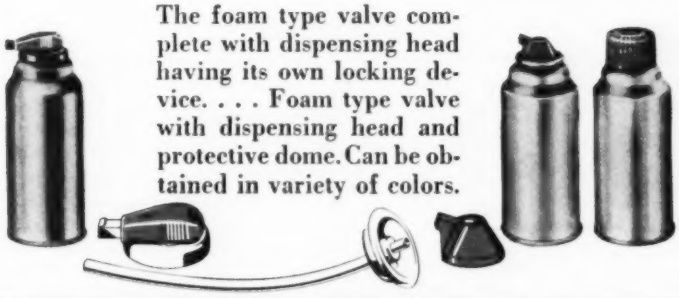
Offered to those who prefer to use their own button design for aerosols or their own dispensing head for foam products.



For containers that have the valve mounting portion incorporated. Precision will supply the complete valve and stake the valve into the container end.



Glass container aerosol valve, complete with button and protective dome.



The foam type valve complete with dispensing head having its own locking device. . . . Foam type valve with dispensing head and protective dome. Can be obtained in variety of colors.

PRECISION has the answer to your aerosol program regardless of product, container, or filling method.

We invite your inquiry to enable our staff of aerosol valve technicians to work cooperatively in satisfying your valve requirements.

PRECISION

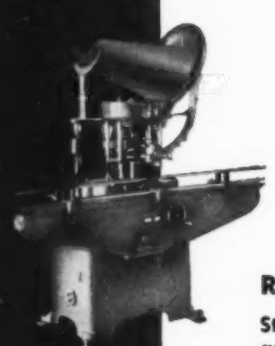
Precision Valve Corporation

700 NEPPERHAN AVENUE • YONKERS 3, NEW YORK

RESINA CAPPERS

A MODEL FOR EVERY PURPOSE . . .
A SPEED FOR EVERY NEED!

Capacity up to 60 per minute.

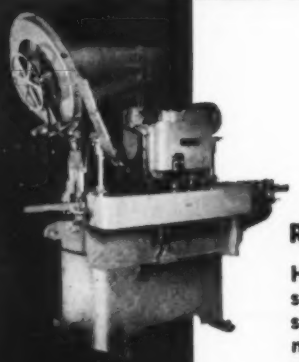


Tops them all

RESINA

Standard, single head, automatic screw capper.

Flexible Fast Fully Automatic

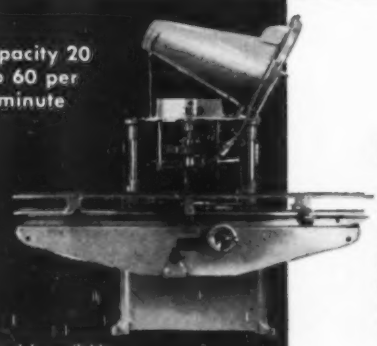


Tops them all

RESINA

High speed, straight line screw capper. Rated for speeds up to 300 per minute depending on size of container.

Capacity 20 to 60 per minute



Tops them all

RESINA

Automatic innerseal machine for selecting and applying standard innerseals to various types and sizes of tin cans as commonly used in the oil industry.

Other models available. Write for descriptive literature.

Agents in principal cities throughout the United States and Canada

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For your information

& Associates, as outgoing president, assumes the status of president ex-officio.

Union Bag & Paper Corp., New York, won the Grand Award in the 25th Annual Best of Industry Contest sponsored by the **Direct Mail Advertising Assn.** and presented for outstanding direct-mail promotions by industry and business. Union Bag's "Yoon Yun" direct-mail campaign, the winning entry, consisted of 20 units mailed over a period of a year to 2,000 executives in plants which represent major customers and prospects for Union's Corrugated Container Division. The award was accepted by **Fred Meendsen**, Union's vice president in charge of advertising and sales promotion, and who was responsible for the creation of the campaign, at the association's recent 36th annual conference in Detroit.

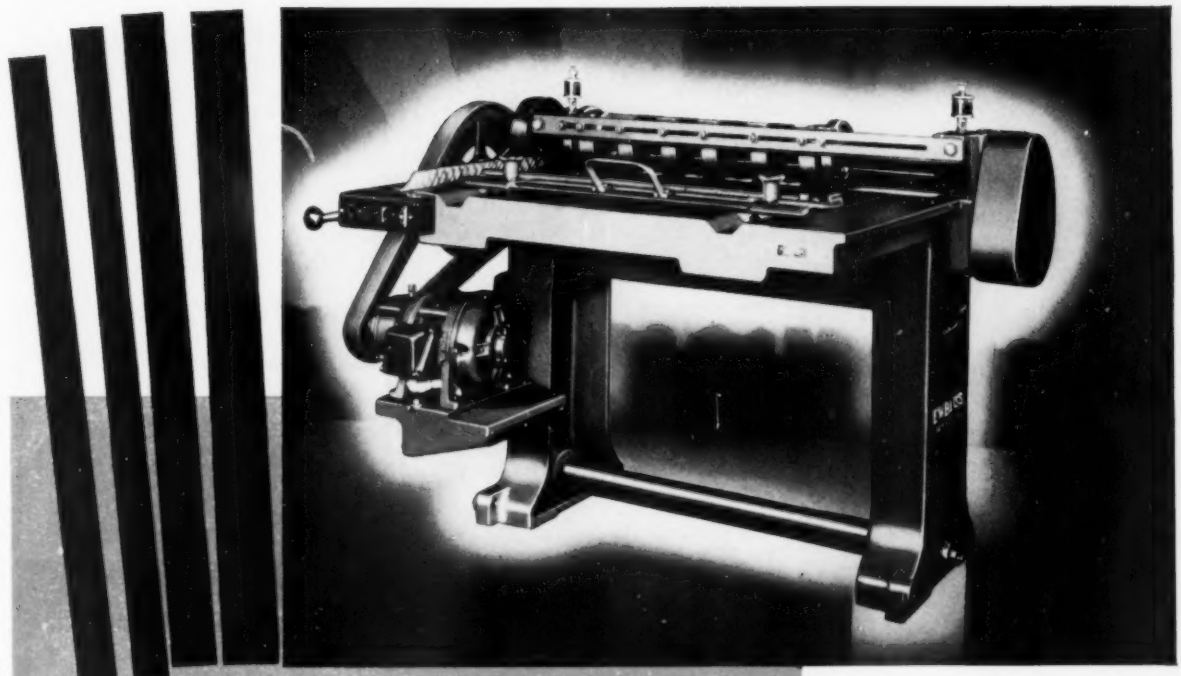


F. Meendsen

"Your Partner in Papermaking," a new 24-page booklet published by **American Cyanamid Co.'s Industrial Chemicals Div.**, outlines the properties of Cyanamid's paper chemical products, describes their uses in papermaking and includes a brief history of the company's development work in the paper chemicals field. Copies of the publication may be had on request to the Paper Chemicals Dept., Industrial Chemicals Div., American Cyanamid Co., 30 Rockefeller Pl., New York 20.

The Paper Bag Institute, Inc., New York, has retained Robert Heller & Associates, Inc., Cleveland, to conduct a survey of paper-bag distribution and usage. The consultant firm will make a study of the industry's over-all operations with relation to development and promotion of new paper-bag uses, an analysis of present sizes, specifications and grades, and a survey of present distribution practices, marketing operations, etc. The Institute believes that the program will benefit manufacturers, distributors and users of the industry's products.

Reynolds Metals Co.'s newest publication, "Foil Beverage Labels," offers data for label designers, label manufacturers and supervisory personnel of bottle-manufacturing plants on the characteristics of aluminum-foil labels. This 8½-by-11-in., 48-page paper-bound booklet will enable



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Whether you want to prepare blanks for can bodymakers, cut strips for strip feed presses, or trim sheets for litho machines, you can pay more but you can't buy better than Bliss.

These rotary-type cutters are engineered to yield consistent, accurate slitter output. Solid one-piece bearings, heavy frames and heavy-duty precision end thrust bearings combine to give the accuracy you need—and give it hour in and hour out over years of steady production.

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If you want accurate, dependable slitter production, the Bliss Gang Slitters are worth investigating. A Bliss Sales Engineer will be glad to help you choose the proper set-up for your production. Meanwhile, for more information about slitters and other equipment in the Bliss line, write for Catalog 36-A.



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For your information

those concerned with designing labels to consider such factors as automatic application in the bottling department, the construction of the foil label as it differs from paper and the miscellaneous characteristics of foil and paper labels. Illustrations and line drawings clarify the text. This is the third in a series of publications on Reynolds aluminum-foil packaging available to designers, engineers and technicians requesting it on company letterhead. Address Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.

The Scientific Section of **The Toilet Goods Assn.** will hold its winter meeting on Wednesday, Dec. 9, at the Starlight Roof, Waldorf-Astoria Hotel, New York. Attendance is restricted to representatives of member companies of the association.

The Industrial Bag & Cover Assn. has announced an extension of time until midnight, Nov. 10, for receipt of entries in its annual award competition for a "form-fitting, flexible package for an article not presently packaged in bag or cover form."

"Standards Are Your Business," a 24-page booklet defining standards of production and their value as tools of management, is a new revised edition published by the **American Standards Assn.** to emphasize the economic importance of standardization. The booklet gives the philosophy and objectives of the voluntary standards movement in the United States and includes specific examples of recent savings effected by several corporations in this country through standardization. Copies are available without charge from the American Standards Assn., 70 E. 45 St., New York 17.

Applications for various types of tissues in the wrapping and packaging of products of all kinds are pointed out in a new 16-page folder titled "Industry Turns to Tissues," published by **The Crystal Tissue Co.** The first of a series of promotional materials on industrial applications for tissues to be offered by Crystal, the folder will be supplied to the company's distributors for use in mailings. Copies of the folder may be had on request to The Crystal Tissue Co., Middletown, Ohio.

The American Society for Testing Materials announces the availability of reprinted copies of the 22-page "Review of ASTM Research," as published in the December 1952 and January and February 1953 ASTM Bulletins. This material, prepared by the ASTM Administrative

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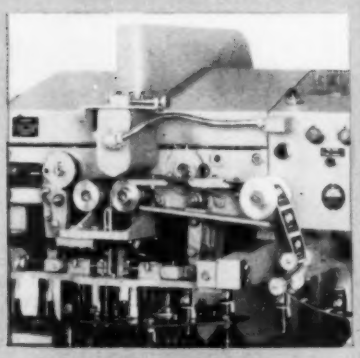


The WORLD Automatic Cellulose Banding Machine takes its place beside WORLD Labelers to eliminate one more slow, costly, laborious hand operation.

Any size and shape of bottle can now be automatically banded uniformly and accurately at bottling line speed. WORLD Automatic Banding Machines are available in models delivering 75, 150 or 225 banded bottles per minute.

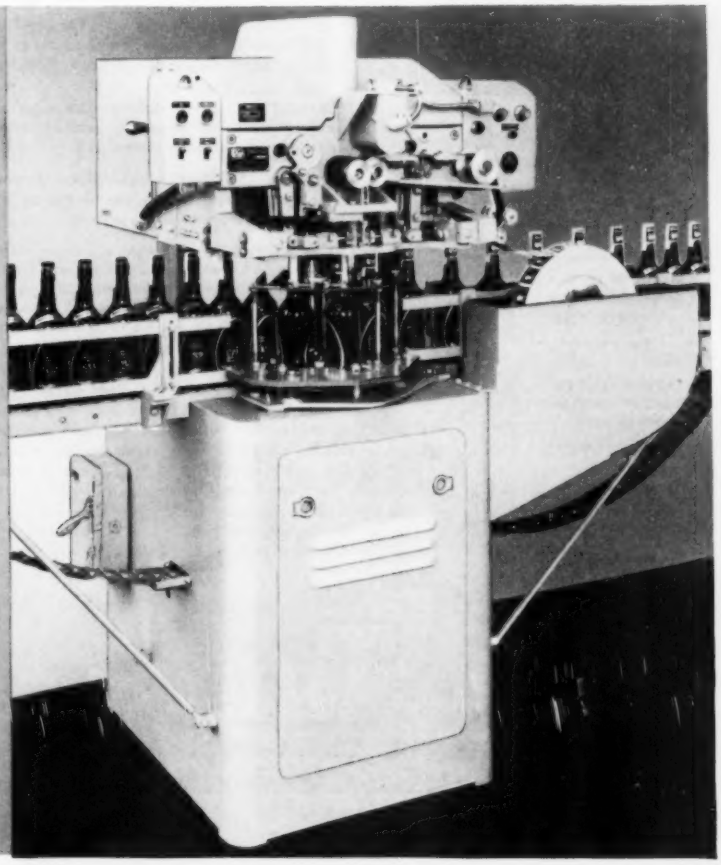
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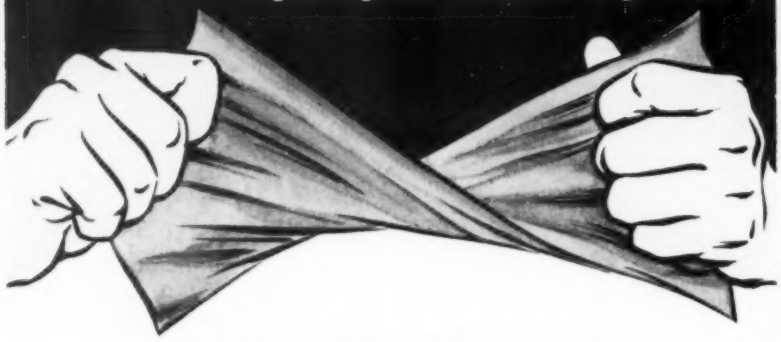
How it Works

The cellulose banding material in roll form is fed into position over the bottle. Accurate cut off of printed bands is controlled by an electric eye. The band is opened by combined mechanical and vacuum action, and stripped off a plunger over the bottle neck and closure. The bottle may be precisely positioned or spotted with relation to the printed band. Operation is fully automatic. Quick changeover to other sizes of bands and bottles is readily effected.



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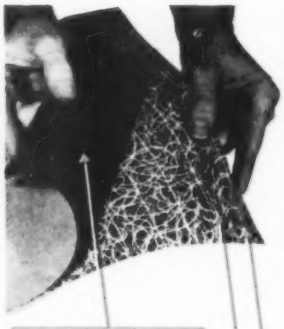
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There's a Wrap-Dri grade for every need. Type MR *machine creped* for a heavy duty and JR *machine creped* for utility use — both available in wide widths up to 10 ft. without lap or seam. Wrap-Dri gives excellent M.V.T. protection and can be furnished mold-proofed or "special treated" to meet most any specific requirement — plus print decorating for product identification. Write for new fact folder today!



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For your information

Committee on Research, summarizes the work of the various technical committees of the Society as of May, 1953. Free copies are available at ASTM Headquarters, 1916 Race St., Philadelphia 3.

Consolidated Chemical Industries, Inc., has issued a new 104-page catalogue to celebrate its 75th anniversary in the industrial-chemical field. The catalogue contains a full account of the company's history, growth and numerous products, as well as product descriptions, specifications, technical data (including tables, graphs and general information), and packaging and shipping information, with illustrations of their 11 plants in the U. S. and Argentina. Copies of the catalogue are available from Consolidated Chemical Industries, Inc., 630 Fifth Ave., New York 17.

E. R. Weidlein, president of the Mellon Institute, is chairman of the advisory committee of the **24th Exposition of Chemical Industries,** to be held at the Commercial Museum and Convention Hall, Philadelphia, Nov. 30 to Dec. 5.

The Container Corp. of America has recently published the eighth edition of its Directory of Owners of the Color Harmony Manual. The Color Harmony Manual, the most nearly permanent system of color standards now available, may be used also for color specification and standardization. The Directory, prepared to keep users informed of its distribution, is available on request to Container Corp.'s Color Standards Dept., 38 S. Dearborn St., Chicago 3. The company will also, without obligation, send those interested a copy of the Manual for trial inspection.

The Gair Cartons division at Piermont, N. Y., of **Robert Gair Co., Inc.,** New York, received the Director's Safety Award of the **Folding Paper Box Assn. of America** for its record of one million manhours without a lost-time accident in its box shop. The Gair company is the first member of the association to be awarded this honor for unusual accomplishment in safety.

Improving supervision in business and industry will be the subject of a special two-day conference to be conducted by the **American Management Assn.** Nov. 30-Dec. 1, Palmer House, Chicago. On view throughout the conference will be a special AMA exhibit of graphic material related to the discussion topics.





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This insert printed by Milprint

U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levey

Single-Blank Carton with Display-Card Cover, H. J. Rossi and A. J. Weiss (to Robert Gair Co., Inc., New York, N. Y.). U. S. 2,649,195, Aug. 18. A carton formed from a single piece of paperboard comprising a tray having a bottom, rear and front walls, and two end walls, a top wall integrally hinged on the top edge of the front wall, and having a cover integrally hinged to the top edge of the rear wall, the top being provided with foldable tabs on its unhinged sides for insertion into the tray.

Automatic Case-Loading Method and Apparatus, J. L. Ferguson and R. C. Talbot (to J. L. Ferguson Co., Joliet, Ill.) U. S. 2,649,231, Aug. 18. In an automatic case loader, a conveyor system for advancing in file articles to be packaged.

Method and Apparatus for Handling Articles, J. L. Ferguson and R. C. Talbot (to J. L. Ferguson Co., Joliet, Ill.) U.S. 2,649,232, Aug. 18. Apparatus for arranging a pre-determined number of uniformly shaped articles in a pre-determined number of files and rows comprising: first conveyor means adapted to engage a portion of the surface of such articles for moving such articles into a horizontal line at an operating station.

Bag-Opening Process and Machine, Including Movable Bag-Opening Arms, H. A. Edmonds (to Swift & Co., Chicago, Ill.). U.S. 2,649,235, Aug. 18. A method of opening a folded paper bag or the like, said method including the steps of applying pressure to each side of the bag substantially across the width thereof a fraction of the length of the bag below its mouth.

Sealed Container, R. C. Ellsworth (to The Ohio Boxboard Co., Rittman, Ohio). U. S. 2,649,239, Aug. 18. In a paperboard container, a bottom, side-wall and end-wall members upstanding from said bottom, a cover member hinged to the upper edge of one of said side-wall members and carrying at its free edge opposite the hinge a continuous, unbroken, downwardly projecting tuck-in flap, the other side-wall member being provided with spaced slits extending downwardly from its upper edge a distance at least equal to the projection of the tuck-in flap and furnishing between them a tongue portion.

Container and Cap Therefor, F. H. Jobson, Atlanta, Ga. U.S. 2,649,225, Aug. 18. In a container having a discharge opening communicating with the interior thereof, a closure cap carried by the container for the movement in a curved path into and out of sealing relation with said discharge opening, a slide member mounted on the container for movement in a path which intersects the curved path.

Spout Cap, J. L. Lay (to A. H. Wirz, Inc., Chester, Pa.). U.S. 2,649,226, Aug. 18. A spout closure comprising a cap having an end wall provided with a central opening and having an annular skirt provided with projections adapted to interlock with the threaded neck of a container and a spout of polyethylene having a tubular spout body with an interior bore.

Blank for Box Production, C. L. Gilbert, Elkhart, Ind. U.S. 2,649,240, Aug. 18. A blank for forming a collapsible box of paper stock, including an elongated series of alternate side- and end-wall sections joined at score lines, a glue flap extending outwardly from one of said sections as a continuation of the elongated series of alternate side- and end-wall sections to receive an application of glue for adhering it to the free end of far section when blank is formed in collapsible box.

Apparatus for Trimming Wrapped Objects, W. F. Lilley and J. F. Stalter to Wingfoot Corp., Akron, Ohio). U. S. 2,649,-909, Aug. 25. A trimming mechanism adapted to be mounted adjacent a conveyor element in a wrapping machine which comprises a pivoted arm means for normally limiting the movement of said arm in one direction about its pivot and carrying a cutting element.

Fragile Article Packaged in Popped Corn, A. R. Rausch (to Sterling Drug, Inc., New York, N. Y.). U. S. 2,649,958, Aug. 25. A package comprising an outer container, a frangible article within said outer container substantially surrounded by popped corn in firmly packed condition and holding said article in spaced relation to the inner walls of said container.

Tablet Dispenser, H. B. Lewis, G. M. Larson and H. Field, Jr., Los Angeles, Calif. U. S. 2,649,994, Aug. 25. In a dispenser for tablets, the combination of a magazine adapted to contain a supply of the objects to be dispensed and provided with a discharge opening for the objects, a dispensing element disposed in and movable relative to magazine, said dispensing element being provided with a stall which is adapted to receive one of the objects and which is movable into registry with said discharge opening in magazine during movement of dispensing element relative to said magazine.

Dispensing Container with Displaceable Bottom, N. Mushkin, Omaha, Nebr. U. S. 2,649,995, Aug. 25. A dispensing container comprising a unitary body structure having a discharge opening at its upper end, said body structure comprising a stiff top and stiff side walls extending from the top downwardly substantially to the bottom limits of the container.

Apparatus for Packing Containers, C. E. Keer (to Food Machinery & Chemical Corp., San Jose, Calif.), U. S. 2,650,009, Aug. 25. A case-loading arrangement comprising, in combination, means for dividing a procession of containers into a plurality of parallel adjacent files, with a case-loading chute disposed beyond the end of said files and adapted to receive a number of containers.

Receptacle Filler and Capper Having Receptacle-Carrier and Capper-Indexing Means, T. H. Kummer and R. E. Bodendoerfer (to Cherry-Burrell Corp., Chicago, Ill.). U. S. 2,650,012, Aug. 25. A receptacle-filling and capping apparatus comprising, in combination, a support, a rotative receptacle carrier, a filling head overhanging a receptacle supporting portion of rotative receptacle carrier with a capper pivoted for oscillatory movement about an axis coincident with the extension of the axis of said rotative receptacle.

Carton, W. P. Frankenstein, Cincinnati, Ohio. U.S. 2,650,015, Aug. 25. In a display box or carton formed from a single blank cut and scored to form a base portion and a cover portion hingedly connected to one another through a hinge fold line and having a cover portion comprising a cover panel with front, back and end walls projecting therefrom toward the base portion.

Automatic Packaging Machine, R. E. Read (to Union Bag & Paper Corp., New York, N. Y.). U. S. 2,650,058, Aug. 25. A packaging machine for filling bags comprising a bag-holding means, a conveyor positioned to discharge material into a bag on the bag-holding means and a weighing scale carrying the conveyor, with hold means and bag, and means for feeding material to the conveyor.

Sealing Mechanism for Wrapping Machines, A. R. Fuchs, Kansas City, Mo. U. S. 2,650,643, Sept. 1. In a wrapping machine, sealing means comprising heating means, means engaging each wrapped package with said heating means with spaced rotable heat-conducting members arranged in a plurality of series.

Band-Type Display Carton, C. M. Shanahan (to Container Corp. of America, Chicago, Ill.). U. S. 2,650,702, Sept. 1. In combination, a band-type carton including top and bottom wall panels, opposite side-wall panels connecting the top and bottom-wall panels, means carried by one of the first-wall panels for engagement with an adjacent end portion of a can-like container embraced by several side panels of the carton for securing the container against accidental displacement from the band at one of its open sides.

Bottle-Packing Machine with Flight Conveyor for Receiving Successive Rows of Articles, A. E. Rideout, K. B. Holstebroe and A. L. Johnson (to Emhart Mfg. Co., a corporation of



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Dome Top — Domes furnished loose and perforated with hole-punch for specified aerosol valves, Regular (12 oz.) or Midget (6 oz.).



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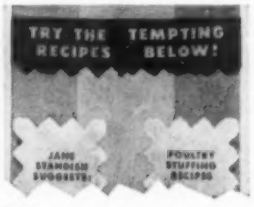


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U.S. patents digest

Delaware). U. S. 2,650,746, Sept. 1. In an article-packing machine, a load-forming enclosure, a case support therebeneath, an article support at one side, guides for maintaining articles on article support in a plurality of rows lengthwise of support and a flight conveyer arranged above article support and load-forming enclosure.

Carton, E. C. Goers (to Marathon Corp., Rothschild, Wis.). U. S. 2,650,751, Sept. 1. A folding carton comprising a tray and cover hinged thereto, tray having a bottom wall, front and rear walls, and a pair of opposed side walls, bellows folds connecting each of side walls to front wall, a portion of each of folds being adhered to the outside face of said side walls and having locking means on the inside face of front wall operable to abut side walls and thus hold them in vertical position when the tray portion is set up.

Packaging Machine, F. B. Casey, R. R. Woodcock and M. E. Wood (to Dewey & Almy Chemical Co., Cambridge, Mass.). U. S. 2,651,350, Sept. 1. In a machine for heat sealing filled bags of thermoplastic material, the combination of a heated flexible support member, providing a resilient yieldable anvil surface and a movable heated sealing jaw formed of good heat-conducting property and adapted to close upon said anvil surface and to heat seal thermoplastic material.

Container for Hypodermic Needles, S. N. Blackman, Teaneck, N. J. U. S. 2,651,407, Sept. 8. A container for hypodermic needles including a receptacle comprising a shallow tray, a shallow lid and means hingedly joining said lid and tray, and means carried by lid for individually detachably holding each needle of a group of hypodermic needles.

Pulley Package, W. P. Koch (to Chicago Die Casting Mfg. Co., a corporation of Illinois). U. S. 2,651,410, Sept. 8. A packaging consisting of a pulley having a hub on one side and a container therefor containing an unobstructed space as wide as the diameter of the pulley and at least as high as the axial length of the pulley and its hub, the container having in the wall facing the hub a central opening smaller in diameter than the pulley.

Label-Applying Mechanism, G. W. von Hofe (to New Jersey Machine Corp., Hoboken, N. J.). U. S. 2,651,429, Sept. 8. In a labeling machine having means at a label-applying station for supporting in shiftable relation thereon an article to be labeled having an opening in a surface thereof, a label carrier having a label-carrying surface and a projecting label-registering member located within the area of said surface.

Carton-Filling Machine, C. J. Malhiot (to F. B. Redington Co., Chicago, Ill.). U. S. 2,651,442, Sept. 8. In a carton-filling machine, a carton conveyor adapted to receive thereon a series of open-ended cartons, a filler conveyor, an article conveyer disposed between said other conveyors, the upper runs of conveyors existing in side-by-side relationship and having a common overlapping portion constituting a filling zone.

Bag Holder, Carriage and Track Assembly, J. W. Carter (to Fulton Bag & Cotton Mills, Atlanta, Ga.). U. S. 2,651,443, Sept. 8. Apparatus for filling bags with fruit or other spherical objects, including loading and discharging stations, which comprises, in combination, a machine frame, a carriage and track assembly carried thereby and including a carriage supporting track.

Bag-Sealing Machine, F. B. Casey, R. Woodcock and M. E. Wood (to Dewey & Almy Chemical Co., North Cambridge, Mass.). U. S. 2,651,444, Sept. 8. A machine for evacuating and sealing flexible bags which have been filled with material to be packaged comprising, in combination, a pair of opposed sealing jaws normally maintained in open position, a support for bag and contents arranged on one side of said jaws, an evacuating nozzle arranged on the opposite side of said jaws in a position to support and substantially fill mouth of bag.

Filler for Cartons, J. L. Dusseault (to Patent Protection Corp., Lowell, Mass.). U. S. 2,651,448, Sept. 8. A corner filler to cushion the rounded end of a boat-shaped article from movement in a rectangular container, said filler comprising an elongated strip of corrugated paperboard bent at spaced transverse lines into a plurality of fibrous hinged panels.

Container Construction, E. N. Burnett (to Gerber Products Co., Fremont, Mich.). U. S. 2,651,449, Sept. 8. A box unit

packaging news... by HARCORD



Bug Blaster's self-dispensing pump gun, has sparked increased demands for this Sherwin-Williams' insecticide. Company states that this Harcord engineered paper package is convenient, effective and has gained unusual consumer acceptance.



Field reports chart a steady rise in sales of Pratt's Crab Grass Killer. Competitively priced paper packaging by Harcord in bright red and black stressing product uses, has proven a strong factor in the sales climb. At Harcord, we feel that our attention to detail and timing has served this product well.



To combat apple scab blight, Coromerc's fungicide ranks with the best. This product, distributed by Corona Chemical Division of Pittsburgh Plate Glass, is packaged in Harcord paper canisters. We're proud to be of service to a superior product marketed by a great company.

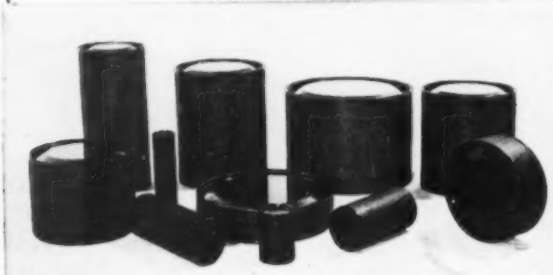


D & P Tomato Dust, a famous fungicide, manufactured by Doggett-Pfeil Company, moved ahead to better display position as a result of Harcord's pump-gun self-dispensing paper canister. Here is a case in point where the packaging proved a boon to a good product.

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adapted for interlocking with a complementary box unit to form a unitary box construction comprising a hollow rectangular parallelepiped container and four flaps constituting extensions of side members of container and closing the top thereof.

Sealed Container, R. C. Ellsworth (to The Ohio Boxboard Co., Rittman, Ohio). U. S. 2,651,450, Sept. 8. In a paperboard container, a bottom, a front-wall member, a back-wall member and similar end-wall members all upstanding from bottom, a cover hinged to back wall and carrying at its edge opposite hinge a tuck-in flap defined from the cover by a folding score.

Valve Bag, R. F. Bennett (to Universal Paper Bag Co., New Hope, Pa.). U. S. 2,651,451, Sept. 8. A valve bag comprising a multi-ply body having a longitudinal gusset and having a top corner folded in at the gusset to form a multi-ply valve, said valve having a series of slits extending outwardly from the inner edge of each and every ply thereof forming a series of superimposed fringes comprising a multiplicity of flexible, independently movable fringe elements which are free to adjust themselves in any direction.

Shirt-Packaging Device, S. Lighter (to Sutherland Paper Co., Kalamazoo, Mich.). U. S. 2,652,156, Sept. 15. In a shirt-packaging device, a unitary sheet of stock provided with upper and lower transverse hinges dividing the sheet into an upper and medial and a lower panel, the medial and lower panels being formed for direct coaction with the upper back portion of the shirt.

Combination Package, G. T. Pfeifer (to The Edwal Laboratories, Inc., Chicago, Ill.). U. S. 2,652,148, Sept. 15. A combination sealed package comprising a rigid container having a sleeve member and end-wall members closing the opposite ends of sleeve member, a first sack formed of a stretchable impermeable film material lining said sleeve member for a part of its length, with the margin of the mouth of said first sack overlying the peripheral edge of one end of sleeve member.

Package Memo Pad, J. R. O'Meara (to Ivers-Lee Co., Newark, N. J.). U. S. 2,652,149, Sept. 15. A package comprising an envelope formed of superposed layers of thin, flexible sheet material sealed together and having at least one article sealed between said layers.

Tape-Applying Movement, A. E. Johnson (to Minnesota Mining & Mfg. Co., St. Paul, Minn.). U. S. 2,652,166, Sept. 15. In a tape-applying machine, an applying movement comprising a pivoted arm, a roller rotatably mounted at the free end of the arm for conducting tape into adhesive engagement with the surface of the object being taped at a tape-applying station.

Corner-Locking Construction for Paperboard Containers, R. E. Acker (to Container Corp. of America, Chicago, Ill.). U.S. 2,652,185, Sept. 15. A blank for a paperboard container comprising a paperboard sheet cut and scored to provide a rectangular bottom panel, an end-wall panel hingedly connected to an edge of the bottom panel, a tab hingedly connected to the end-wall panel and a side-wall panel hingedly connected to an adjacent edge of the bottom panel.

Carton, J. A. Zinn, Jr., Chicago, Ill. U.S. 2,652,186, Sept. 15. In a blank, in combination, a first panel, a second panel, a third panel, a fourth panel and a connector section, said panels being defined and joined together and to said connector section by crease lines, first panel having a flap swung thereon, third panel having a flap swung thereon, each of two flaps having side edges spaced apart a distance equal to its axis of swing.

Paper-Bag Handle, H. K. Steen and H. L. Thompson (to Interstate Bag Co., Inc., Walden, N. Y.). U. S. 2,652,187, Sept. 15. A collapsible bag and a handle, the handle comprising a single generally U-shaped member of fibrous ribbon-like material possessing, in addition to the tensile strength necessary to suspend the loaded bag, substantial stiffness and resilience.

Feed Mechanism for Carton-Blank Forming Apparatus, G. Kane, Green Bay, Wis. U. S. 2,652,247, Sept. 15. Paper-web feeding mechanism for feeding a pre-determined length of paper web previously perforated along one edge thereof to a press comprising intermittently driven draw rolls and an intermittently driven feed belt having pins engageable in the perforations on said web.

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CONTINUOUS FEEDER FOR BULK PRODUCTS. Data sheet on a continuous feeder designed to handle dry, free-flowing, and ground bulk materials in a continuous stream. Accurately weighs the materials as they are fed. Specifications included. Richardson Scale Company. (K-351)

ROTARY HEAT SEALER. Folder discusses the Doughboy rotary heat sealer, and devices used in conjunction with it for coding and hole punching bags, plus a compression unit for sealing. Doughboy Industries, Inc. (K-352)

HEAVY DUTY CUTTING AND CREASING PRESS. Bulletin explains the features of this machine which rapidly and effectively cuts and creases corrugated and solid fibreboard for the production of small and medium size boxes, platforms, showcards etc. Post Machinery Company. (K-353)

MARKING EQUIPMENT FOR INDUSTRY. Catalog with data on various marking machines, conveyor markers, multiwall bag printer, a corrugated and fiber shipping case printer, and several hand operated printers. Contains chart of available base-lock rubber type and price list. Industrial Marking Equipment Co. (K-354)

TRANSPARENT PLASTIC CONTAINERS. Bulletin illustrates twenty-three different plastic containers, some with metal lids or bases, others with lace edge insets. Weinman Brothers, Inc. (K-355)

OLIN CELLOPHANE. Description of the manufacturing facilities for cellophane, and services offered cellophane users by Olin Cellophane Div., Ecusta Paper Corp. (K-356)

COLORED INDUSTRIAL TAPES. Fourteen varieties of industrial tapes are shown in folder on "Scotch" brand pressure-sensitive tapes. Uses of eight different colored tapes are suggested. Minnesota Mining and Manufacturing Co. (K-357)

FOAMED-IN-PLACE PLASTICS. Booklet covers the advantages of using Nopco "Lockfoam" foamed-in-place plastics for packaging fragile items and for vibration dampening. Charts depict insulating, adhesive and compression resistant properties. Nopco Chemical Company. (K-358)

"PRINT-AD-STRING." Details on a tough, non-woven, cotton industrial tape which may be printed with brand names, slogans, codings, or footage indication. Chicago Printed String Company. (K-359)

TUBE FILLERS. The major items in the Colton line of automatic, semi-automatic, and hand-operated tube fillers and closers, and can and capsule fillers are described in a broadside folder. Arthur Colton Company. (K-360)

ENGRAVED INKING ROLLERS. Bulletin illustrates various "Evenflo" precision engraved rolls for applying ink, plastics, adhesives, and other fluids in aniline presses. Paper Machinery and Research Corp. (K-361)

RUST-PREVENTING PAPER. Case histories show how Angier V. P. I. paper is used to protect metal from rust at lower cost than by older methods such as oil or grease slushing. Angier Corp. (K-362)

PACKAGING MANUAL FOR SELF SERVICE MEATS. Brochure extensively covers all major aspects of prepackaging meats and poultry for self-service selling. Includes step-by-step illustrations for specific cuts, data on labeling, efficient packaging procedure, and department layout. The Goodyear Tire & Rubber Co. (K-363)

PHOTOELECTRIC CUT-OFF REGISTRATION CONTROL. Booklet explains the operation and advantages of the "EMP Complete Unit Photoelectric Registration Control" for maintaining accurate register and cut-off in bag making and other high-speed web equipment. Electronic Machine Parts, Inc. (K-364)

WATERPROOF CASE LINERS. Data on "Submerso-Pak" moisture-proof, watertight, creped asphalt-laminated Kraft paper case liners for protection of a wide range of products. Cincinnati Industries, Inc. (K-365)

TAMPER-PROOF AND SCREW CLOSURES. Folder with numerous application photos showing how "Filma-Seal" closures and regular screw caps are used to protect various products from leakage, evaporation, air and moisture exchange, and tampering. Ferdinand Gutmann & Company. (K-366)

"HYDROTONE" INK COLOR SELECTOR. Selector shows thirty different standard ink colors, and dozens of color combinations for printing Kraft, tissue, or other absorbent stocks. Bensing Brothers & Deeney. (K-367)

ROLL SLITTING AND REWINDING MACHINE. Specification on the model "Rapid D" slitter and rewinder, which is suitable for most grades of paper from 3 lbs. to 140 lbs., and for fabrics, plastics and metal foils. Will produce extremely narrow rolls. The Clark-Aiken Co. (K-368)

BOTTLE LABELING. Folder lists methods for applying labels to bottles manually or by machine. Includes label characteristics affecting adhesive selection and a listing of the most popular Paisley bottle labeling adhesives. Paisley Products, Inc. (K-369)

SAFETY SEAL AEROSOL VALVES. Permanent shelf-life valves for containers of insecticides, deodorants, aromatics, etc., are described in a folder issued by the Dill Manufacturing Co. (K-370)

INTEGRATED MANUFACTURING OPERATIONS. Booklet explains how its various divisions —research, glass making, packaging machinery, plastics, and heavy machinery— can be of service in the solution of a wide range of industrial problems and manufacturing operations. Standard-Knapp, Div. of Emhart Mfg. Co. (K-371)

"FIBRO" CUSHIONED PADS. Folder with samples of package padding which are wrapped in creped and waxed kraft, and in waterproof paper. Meet various government packaging specifications. Fibleco Illinois Corp. (K-372)

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STEEL SHIPPING BARRELS. Application information and specification data on a complete line of steel shipping pails including ones with double compartments, dispenser tops, interior coatings, and special closures. J. & L. Steel Barrel Co. (K-375)

ELECTRIC LABEL DISPENSER. Data sheet with information on the specifications and use of an automatic dispenser to speed hand application of "Kum-Kleen" pressure sensitive labels. Avery Adhesive Label Corp. (K-376)

PRINTING ON POLYETHYLENE. Informational bulletin discusses the problems of printing on polyethylene and outlines the methods used by various printers. Chester Packaging Products Corp. (K-377)

ROTARY CORKING MACHINE. Information about a new automatic rotary corker, which applies all sizes of flanged corks to all types of bottles at speeds from 50 to 100 per minute. U. S. Bottlers Machinery Co. (K-378)

PAPER CONVERTING EQUIPMENT. Bulletin with brief descriptions of the following Dilts paper converting machines: waxer, double embosser, plastic winder, "Contracoater," combination reel and unwinder. Dilts Machine Works, Div. of the Black-Clawson Co. (K-379)

VEGETABLE PARCHMENT PAPER. Booklet gives background information about this high wet-strength and grease-resisting packaging material. Covers method of manufacture, physical properties, and recommended applications in the packaging of foods, drugs, and other products. Paterson Parchment Paper Co. (K-380)

CELLOPHANE WRAPPING MACHINE. Folder describes a high-speed cellophane wrapping machine with electric eye registration, which is particularly well adapted for wrapping display cartons containing tomatoes and other perishable fruits and vegetables. Hayssen Mfg. Co. (K-381)

ROLL LEAF MARKING MACHINES. Data on two air-operated "Kensol" hot leaf marking machines for making metallic and color imprints on items made of paper, cloth, plastics, wood, and leather. Olsenmark Corp. (K-382)

"THE MARKEM STORY." Booklet traces the history and illustrates the manufacturing facilities of this company. Depicts the various types of marking and imprinting machines made for use on paperboard, fabrics, plastics, ceramics and other materials. Markem Machine Co. (K-383)

COLORED FOIL. Swatch booklet contains samples of twenty-three plain and embossed varieties of colored foil produced by Floyd A. Holes Co. (K-384)

VOLUMETRIC FILLER. Bulletin covers the features and operations of bench and floor "Whiz-Packer" volumetric filling machines for free flowing products. Frazier & Son. (K-385)

SETTING-UP MACHINE FOR GLUE LAP BOXES. Data on a duplex automatic machine for setting-up conventional glue lap boxes and covers at high speed. Inman Mfg. Co. (K-386)

PACKAGE IMPRINTING. Brochure showing how various manufacturers imprint supplementary package information automatically with the Gottscho "Markocoder." Adolph Gottscho, Inc. (K-387)

GUIDE TO CAST PLASTIC FILMS. Physical and chemical properties of six basic types of "Vinylite" cast plastic films are outlined in a useful handbook. Bakelite Co., Div. Union Carbide & Carbon Corp. (K-388)

SILICONE PRODUCTS. Latest reference guide to silicone products. Covers such items as anti-stick materials, silicone adhesives, water repellents, protective coatings, and defoamers. Dow-Corning Corp. (K-389)

ELECTRONIC SEALERS. Bulletin describes "Thermatron" electronic sealing units for use on acetate, vinyl and other thermoplastic sheet and film materials. Radio Receptor Co., Inc. (K-390)

"SHEFFIELD PROCESS" COLLAPSIBLE TUBES. Booklet covers the manufacture, sizes and styles, decorating, coating, filling, and shipping of collapsible tubes with special emphasis on the "Sheffield Process" to achieve a maximum of pliable toughness. The Sheffield Tube Corp. (K-391)

AUTOMATIC CARTON BLANK STRIPPER. Details on the operation of a device for use with the Miehle Cutter and Creaser which automatically strips front, side and tail trim, and internal scrap from die cut carton blanks. Miehle Printing Press & Mfg. Co. (K-392)

TESTING POLYETHYLENE BOTTLES. An explanation of several tests prospective users should make before deciding on the suitability of "Millsplastic" polyethylene bottles for packaging their product. Elmer E. Mills Corp. (K-393)

BEMIS "QUANTACOLOR" BAGS. Booklet explains the "Quantacolor" method for selecting the most suitable combination of colors for a package, and its relationship to Bemis service. Bemis Bro. Bag Co. (K-394)

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Designers awards

(*This article continued from page 129*)

Mich.; Marathon Corp., Menasha, Wis. *Honorable mention:* Folger coffees, designed by Frank Gianninoto, New York, for J. A. Folger & Co., Kansas City, Mo. Suppliers: Cans American Can Co., New York; jars, Ball Bros. Co., Muncie, Ind. *Honorable mention:* Borden's Wej-cut cheeses, designed by Frank Gianninoto, New York, for The Borden Co., New York. Supplier, Milprint, Inc., Milwaukee, Wis.

3. Self-service drug package—*Top award:* Ebonettes Rubber Glove display carton, designed by Raymond Loewy Associates, New York, for Pioneer Rubber Co., Willard, Ohio. Supplier: The Gardner Board & Carton Co., Middletown, Ohio.

Honorable mention: Chix and Chux diaper packs, designed by Koodin-Lapow Associates, New York, for Chicopee Mills, Inc. Suppliers (Chux): Robertson Paper Box Co., Montville, Conn.; (Chix) Sample-Durick Co., Chicopee, Mass. *Honorable mention:* Lilt home-wave line, designed by Donald Deskey Associates, New York, for Procter & Gamble Co., Cincinnati. Supplier: The Richardson-Taylor-Globe Corp., Cincinnati.

4. Self-service cosmetic package—*Top award:* Lucky Draw perfume boxes, designed by Eric de Kolb, Helena Rubinstein, Inc., New York, for Helena Rubinstein, Inc. Suppliers: Boxes, George H. Snyder, Inc., Philadelphia; printing, C. H. Forsman Co., New York.

Honorable mention: Helena Rubinstein perfumed bath salts, designed by Eric de Kolb. Suppliers: Glass containers, Owens-Illinois, Toledo; printing, Graphire Corp., Bronx, N. Y. *Honorable mention:* Helena Rubinstein Jewel Tassel perfumes, designed by Eric de Kolb. Supplier: Cartons, Robert Gair Co., Inc., New York. *Honorable mention:* Tang Men's Toiletries, designed by Eric de Kolb, Helena Rubinstein, Inc., for Gourielli, Inc., New York. Suppliers: Cartons, Robert Gair Co., Inc., New York; bottles and closures, Owens-Illinois Glass Co., Toledo.

5. Miscellaneous self-service package—*Top award:* Continental Cheese Assortment, designed by Archie M. Schrom, Chicago, for Sue Ann Food Products Corp., Chicago.

Honorable mention: Flint Decorator Kitchen Tools, designed by Raymond Loewy Associates, New York, for Ekco



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Products Co., Chicago. Supplier, Container Corp. of America, Chicago. *Honorable mention:* Universal Steam & Dry Iron, designed by Gerald Stahl, New York, for Landers, Frary & Clark, New Britain, Conn. Supplier: Container Corp. of America, Chicago. *Honorable mention:* E Z Paintr Roller Kit, designed by John K. Richards, Design Directors, Inc., Chicago, for E Z Paintr Corp., Milwaukee. Supplier, General Container Corp., Chicago.

6. Department store self-service package—*Top award:* Terry Tweed Towel Pack, designed by John & Earlne Brice Design Studios, New York, for Martex Div., Wellington Sears Co., New York. Supplier: Old Dominion Box Co., Charlotte, N. C.

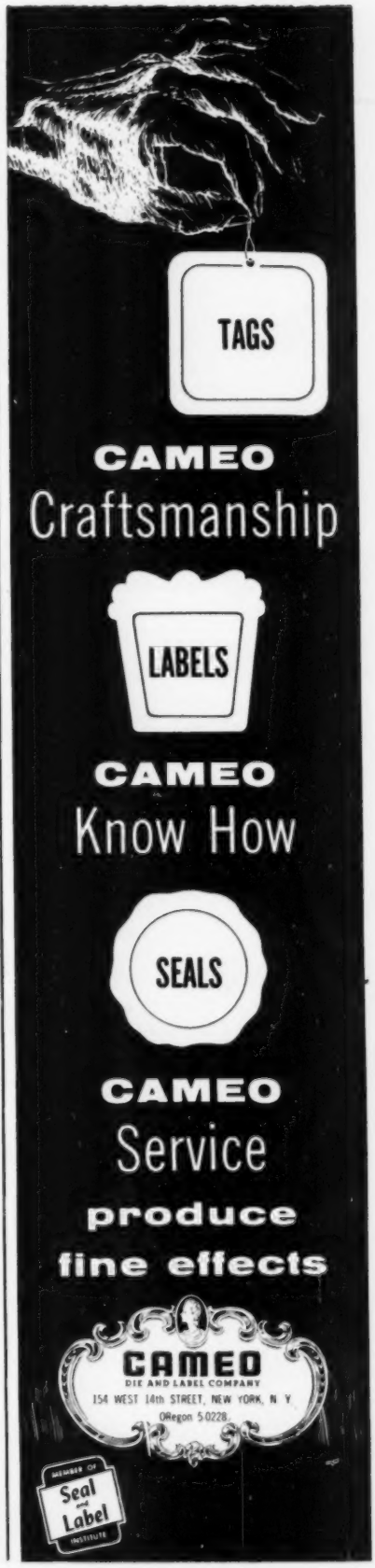
Honorable mention: Holgate Toys, designed by Frank Gianninoto, New York, for Holgate Toys, Kane, Pa. Supplier: Robertson Paper Box Co., Montville, Conn. *Honorable mention:* Arrow Shirts & Accessories line, designed by Kenwood Dixon, Robert Gair Co., Inc., New York, for Cluett, Peabody & Co., Inc. Supplier: Robert Gair Co., Inc.

7. Redesign project—old and new—*Top award:* Kings Beer labels, designed by Jim Nash, New York, for Dow Brewery, Ltd., Montreal, Canada. Supplier: Aluminum Rolling Mills, Ltd., Quebec, Canada.

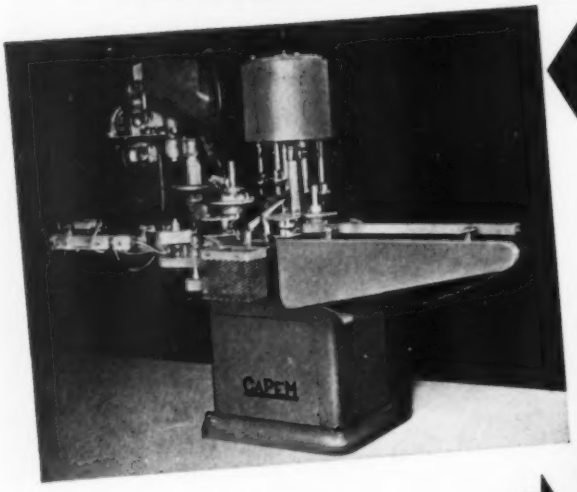
Honorable mention: El Producto Cigars, designed by Paul Rand, New York, for G. H. P. Cigar Co., New York. Supplier: Schlegel Lithographing Corp., New York. *Honorable mention:* Stevens Utica-Mohawk sheets and pillow cases, designed by Koodin-Lapow Associates, New York, for J. P. Stevens & Co., Inc., New York. Supplier: Container Corp. of America, Chicago; F. M. Howell & Co., Elmira, N. Y. *Honorable mention:* 40 Fathom Frozen Sea Food, designed by Frank Gianninoto, New York, for Birds Eye Div., General Foods Corp., New York. Supplier: Marathon Corp.

8. New package for a new product—*Top award:* Folium Fertilizer Family, designed by Rudolf Czufin and Albert Quinlan, Gardner Advertising Co., St. Louis, Mo., for Monsanto Chemical Co., St. Louis. Suppliers: Mulligan Printing Co., St. Louis, Mo.; Shellmar Products Corp.

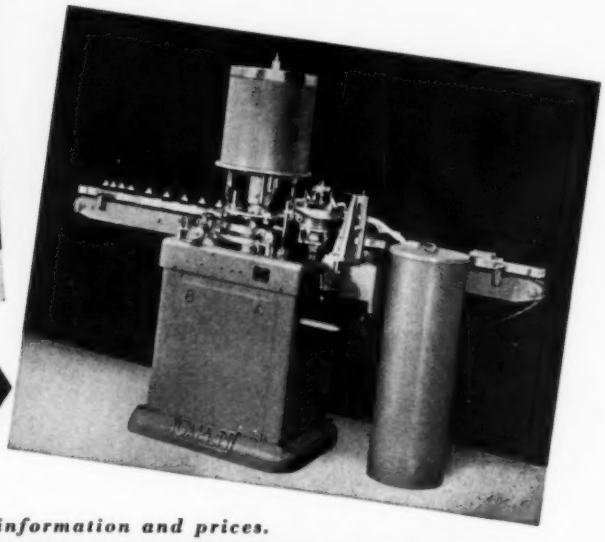
Honorable mention: Kent Cigarettes display carton, designed by F. S. Sergenian, Young & Rubicam, Inc., and Sam Marsh, New York, for P. Lorillard Co., New York. Suppliers: Cartons, National Folding Box Co., New Ha-



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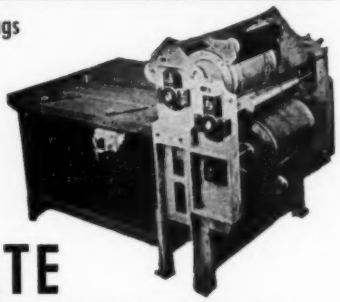
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ven, Conn.; wraps, Schlegel Lithographing Corp., New York, and U. S. Printing & Lithograph Co., Cincinnati. *Honorable mention:* Captain's Choice Frozen Sea Food, designed by Walter Landor & Associates, San Francisco, Calif., for Brighton Fish Co., Div. Safeway Stores, Inc., Oakland, Calif. Supplier: Marathon Corp., Menasha, Wis. *Honorable mention:* Kellogg's Sugar Frosted Flakes, designed by Andrew F. H. Armstrong, Leo Burnett Co., Chicago, for Kellogg Co., Battle Creek, Mich.

New luminescence

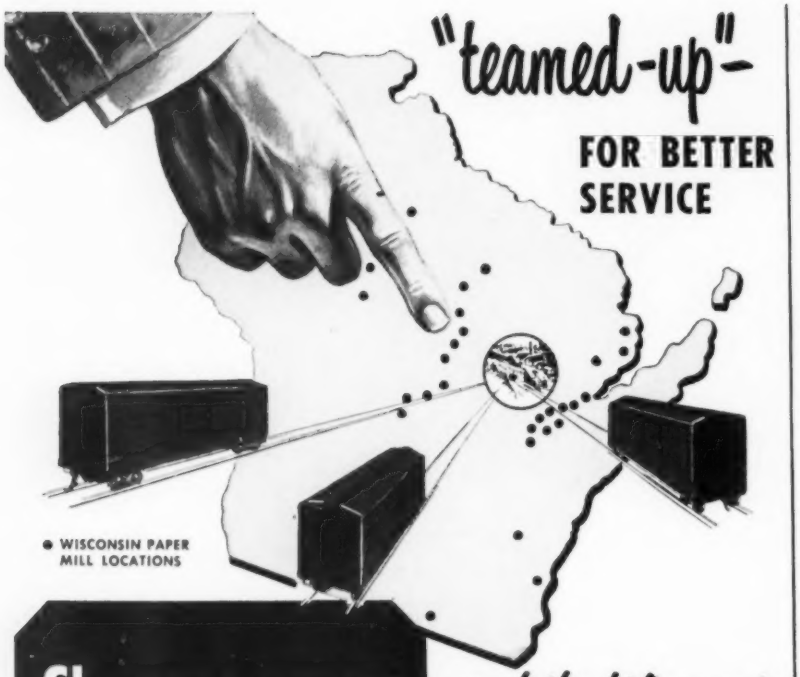
(This article continued from page 115)

the top of the package, and carrying over into the side panels. With this new package treatment, the user does not have to tear the top open to remove the cereal, but merely pushes the package in along the front score line and folds the top back for convenient dispensing into dishes. This leaves a smooth edge over which the product pours easily.

Although the Puffed Wheat and Puffed Rice are the only packages which Quaker has thus far placed on the market involving the luminescent printing inks, the company has been conducting studies with various other packages in the line. Some extremely interesting results have been obtained in these tests. Quaker has not yet announced any definite plans for extending the process to other packages, but this is expected momentarily. Experience to date indicates that the most effective results may be obtained by spotting the luminescence at strategic points on the package and by not trying to combine too many of the glowing colors in a single package. It should be pointed out, however, that the effect is by no means limited to yellow; a number of other pastel colors can be similarly applied. Due to their transparency, they are used with maximum effect directly on white board.

Although all of the Puffed Wheat and Puffed Rice packages are now being produced with the luminescent yellow ink, special displays in which black lights are used have been set up only in selected market locations. Quaker merchandising officials believe that as the display possibilities of the new packages become familiar to food retailers, many of them will arrange to substitute black-light tubes for one or more of the





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SHAWANO THIN PAPERS ARE MADE FOR:

Protective packing and wrapping men's, women's and children's clothing, shoes, furs, gloves, millinery, hosiery, handbags, accessories, cosmetics, jewelry and gifts

Wrapping and interleaving ferrous and non-ferrous metals, machine parts, automobile parts, electronics, gold, silver, copper, brass, aluminum, stainless steel, cutlery and band instruments

Papers for business forms, stationery, advertising

Packaging food products—and thousands of other products of all kinds.

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- LIGHTWEIGHT MF PRINTING PAPERS
- INTERLEAVING TISSUES
- ANTI-TARNISH TISSUE
- WRAPPING TISSUES
- BLEACHED TISSUES
- REGISTER BOND

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Shawano
PAPER MILLS
SHAWANO • WISCONSIN

standard tubes in their fluorescent lighting fixtures, so that unusual lighting effects can be created.

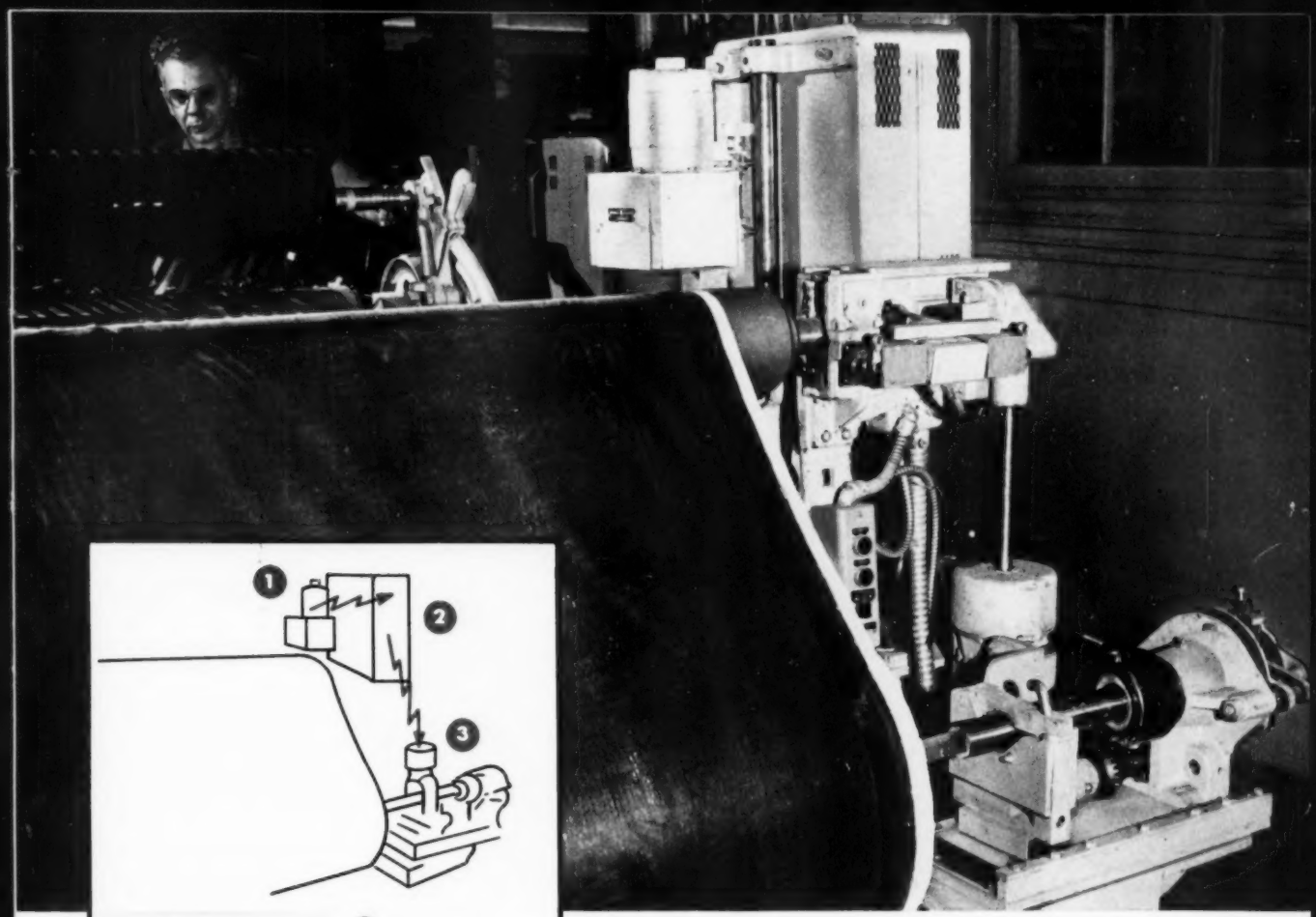
In this connection, the point should be made clear that even under standard store lighting, or in daylight, the new packages have greater display impact than those previously used, due to the brilliance of the yellow ink under all types of lighting conditions. When displayed under store lighting with the addition of one or two black lights, the packages gain much stronger attention value. The most arresting effects are obtained when the packages are seen in complete darkness except for black light. Although such treatment is difficult to arrange in regular store shelving, its possibilities for strategically placed display "shadow" boxes or for night window display may be appreciated.

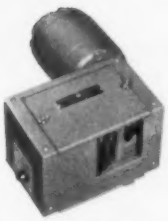
With the introduction of daylight fluorescent colors more than a year ago, the new merchandising and display opportunities possible by using ultra-violet lighting in conjunction with packages utilizing this interesting type of "built-in" illumination were foreseen. With the advent of the new Quaker packages and the perfection of ink formulations which overcome some of the earlier limitations of this process, it seems reasonable to assume that alert designers and manufacturers will wish to investigate all phases of the development.

It is still too early to give all the answers on public reaction, store display limitations, most effective color treatments and many of the other questions which will crop up. As MODERN PACKAGING pointed out earlier, it can at present be rated only as a novelty and, like most novelties, it may wear itself to an early death. However, the Quaker packages stand as proof that standard paperboard can now be printed with luminescent inks, at speeds sufficiently high and costs sufficiently low to make such packages commercially feasible.

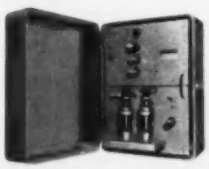
No one can predict just how far this interesting new packaging technique will go in the next few years. This is something that competition—plus the ingenuity of package designers and the merchandising know-how of modern business—will have to determine.

CREDITS: *Luminescent cartons produced by Michigan Carton Co., Battle Creek, Mich., and Ohio Boxboard Co., Rittman, Ohio, using luminescent printing inks by National Printing Ink Corp., 123 N. Sangamon St., Chicago.*





1 PHOTOELECTRIC SCANNER rapidly swings light beam across line or edge, generating electrical pulses. Time at which pulses occur indicates web position. If web moves, scanner instantly notifies . . .



2 CONTROL PANEL After determining the direction in which a correction must be made to bring web back in register, the control panel amplifies the signal sent by the scanner. It then actuates...



3 CORRECTION MOTOR which repositions web until scanner receives correctly-timed pulses. At this point, web is again in register, and repositioning stops unless mis-register reoccurs.

ON THIS SLITTER, PRECISION ACCURACY OF . . .

G-E Side Register Control Permits Higher Web Speeds

This G-E photoelectric side register control system is capable of handling run-out rates of 50 inches per minute at web speeds as high as 10,000 feet a minute! It can detect web side motion as little as 1/1000th of an inch!

Versatile G-E control can be applied to slitting, side trimming, rewinding, or printing operations. Photoelectric scanner operates from nearly any material by guiding either the edge of the web or a printed line, broken or continuous.

Completely automatic, this G-E system maintains register more economically and more efficiently than an operator. Photoelectric operation means few moving parts, long and dependable service. Its operation is simple, its maintenance requirements few—your plant electrician can perform routine service.

For more information, contact your nearby G-E Apparatus Sales Office or write for Bulletin GEA-5947. *Section 785-6, General Electric Company, Schenectady 5, New York.*

GENERAL ELECTRIC



EVEN THE RICH CAN'T AFFORD OVER-WEIGHTS!

Today's profit margin is too thin to permit overweights. Efficient packaging lines demand accuracy with their high speed weighing and filling. That's why manufacturers are changing to Hy-Tra-Lec weighing systems.

Hy-Tra-Lec is that amazingly accurate method of weighing. And with Hy-Tra-Lec, you get more than just an isolated weigher or weighers. **You get a system,** engineered for your particular operation; complete, if desired, with conveyors; integrated with other phases of your production-packaging line to permit efficient, dependable operation with minimum use of floor space.

Look ahead to more accurate, less expensive weighing and filling. Without obligation, get a Wright study and recommendation.

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LOW COST BAGGER



Handles 101 Small Products

ONLY $65.00
Slightly higher with extra large bag chute.

The Anderson Bagger, Model 134, is a simple, low cost machine that is doing an outstanding job for thousands of users in many industries. Operator can fill a bag and place it in a carton in one operation.

Stainless steel bag chute, capacity 200 bags, adjustable to bag sizes. Blower, equipped with air filter, opens bag and keeps it free from foreign matter.

Easy to operate at high speed with a minimum of effort. Here is a machine that pays for itself quickly. Write today and tell us your product.

Anderson BROS MFG CO

Send Today for Bulletin No. 11-29

ANDERSON BROS. MFG. CO., ROCKFORD, ILL.



CLAREMONT FLOCK
for Package and Product

Claremont supplies its Flock (cotton, rayon or wool) to paper converters and manufacturers in a rainbow of colors ranging from brilliant hues to pastel tints. In the hands of imaginative designers, Flock serves as a magic carpet with which to create a new, highly salable package and product allure. Color cards, samples and details available upon inquiry.

CLAREMONT FLOCK-TO-PACKAGE
Available through paper merchants in ready-to-use paper or board-backed form. Ideal for glamour packages, gift boxes and enclosure cartons. Surface lends to printing or stamping. Handles perfectly. Economical luxury. Photo, courtesy of "Presentations," a division of Walter J. Gallagher Adv., N Y 10

CLAREMONT FLOCK-TO-PRODUCT
Supplied in bulk to specs. Sprayed to adhesive-prepared surfaces. Creates suede-like plush topping with full "3D" values. Durable Eye-appealing. Pictured here as applied to turn-table component of the Duosonic "Capri," a portable, 3 speed, all-size record playing phonograph. Photo courtesy Sonic Industries, Inc., Long Island, N. Y.

CLAREMONT WASTE MANUFACTURING CO.
The Country's Largest Manufacturer of Flock
CLAREMONT NEW HAMPSHIRE

New card promotion

A colorful, new merchandising "gimmick" being used by the Ritter-Price Co., Inc., Los Angeles, for their Gay Blade pre-packaged fresh carrots



is this full-color postcard picture of the polyethylene bagged carrots, looking fresh, bright and cool. The reverse side of the card has a printed description of the packaging process itself. Gay Blade carrots, says the card, "are triple washed in ice water and packed immediately after harvesting. Graded for size and color." Also included on the reverse side of the card is a printed list of "Gay Blade" prices, as well as space for addressing the card.

The polyethylene bag, reproduced on the card in its exact colors, is printed in royal blue, white and leaf green which emphasize the bright orange of the carrots.

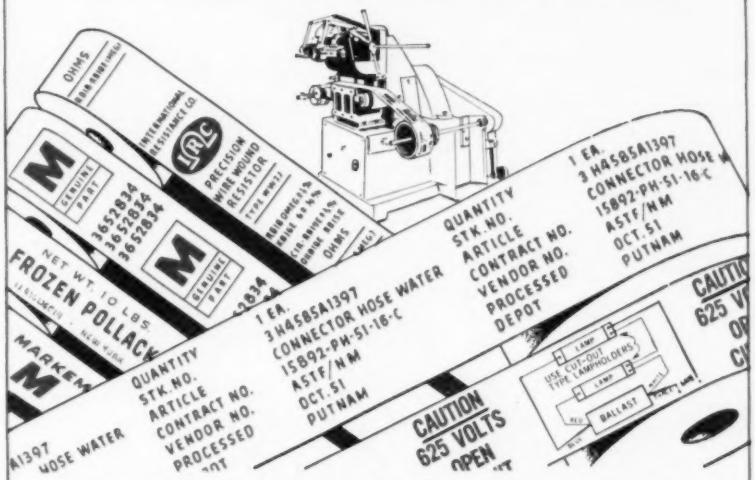
CREDIT: *Bag, Milprint, Inc., 4200 N. Holton St., Milwaukee 1, Wis.*

Cellophane prices

Cellophane sales by the American Viscose Corp. will be made on a delivered price basis, effective Nov. 1, according to Harry L. Dalton, vice president of the corporation. Under the new plans two price lists will be effective, one for deliveries in the Western states of Arizona, California, Idaho, Montana, Nevada, Oregon, Utah and Washington; the other list for all other states. To compensate for the new delivery terms, prices on all items will be increased one cent per pound in the Eastern area and two and a half cents per pound in the Western area. These increments will be added to every item in the current price scale. Cellulose bands, casings and other products of the Sylvania Div.'s plant at Fredericksburg, Va., are not included in the change.

MARKEM SOLVED THIS MARKING PROBLEM

PRINTING LABELS ON PRESSURE SENSITIVE TAPE



The introduction of pressure sensitive tape for industrial uses offered many advantages if *label* data could be printed on the tape *in the plant itself when needed*. Markem developed methods that permit printing of stock number, part number, trade mark or other designation on this tape. Label inventory problems are thus eliminated. Manufacturers can now print the exact number of labels required . . . readily changing variable information or color of ink when desired. The Markem method used includes a Markem machine which makes up to 85 imprints per minute, rewinds the roll of tape automatically, and shuts itself off after a selected number of imprints. Thus Markem has provided industries of all types with a more modern, more attractive and less expensive means of labeling.

MARKEM® MARKS THEM ALL



CAN MARKEM HELP YOU? Printing labels on pressure sensitive tape is but an example of how Markem solves industry's marking problems. Markem has been providing industry with production techniques and equipment to identify, decorate or designate its products, parts and packages since 1911. Markem also provides technically trained men who are available in your area to assure *continued* satisfaction with Markem methods and equipment.

When *you* have a marking problem, tell us about it and send a sample of the item to be marked. Perhaps a complete Markem method has already been developed to solve your problem. If not, Markem will work out a practical solution.

Markem Machine Company, Keene 1, N. H., U.S.A.

MARKEM ... TO MAKE YOUR MARK



"My growth is in step with modern visible packaging"

says H. N. PANGLE, Pangle's Master Market, Lima, Ohio

"My growth is in step with modern visible packaging. Ever since I have been able to offer a great variety of well-packaged merchandise in self-service arrangement, my business has continued to grow and grow.

"In Pangle's Master Market, we take pride and we know we are smart in doing so, in placing practically every visible packaged item on display, because we know that is the kind of merchandise which catches the customer's eye and sells itself.

"There is nothing more appetizing than colorful fruits and vegetables in sparkling glass jars which tell the shopper immediately how much, how big, how good, how much better than; and when these questions are answered, as glass answers them, sales follow."



Apple sauce is one of the products that has made greater and greater use of salespackaging in glass.



One strong reason for the appeal of glass for such products as apple sauce is that housewives prefer it for ease of reseal and storage of unused portions in the refrigerator.

Today's self-service selling demands a self-selling package—*GLASS!*

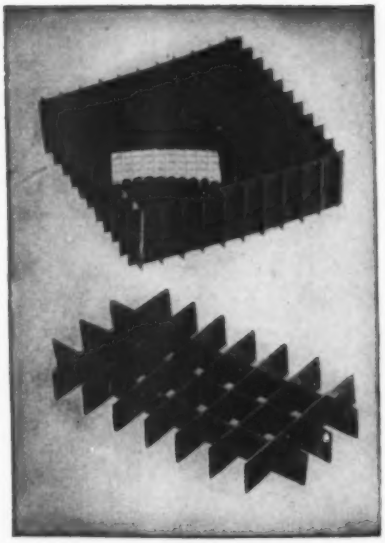
With the growth of self-service, packaging has become a more important sales tool than ever before. There's no more profitable way to sell a product than to let it sell itself—in glass!

For example, a 9-week study of super market sales in Cleveland, Ohio, shows glass packages do a real sales job for apple sauce.

Glass accounted for a clear majority of the total sales which consisted of one brand in glass, a second brand in tin, and a third brand in both glass and tin.

Duraglas TRADE MARK REG. U.S. PAT. OFF. **CONTAINERS SELL FOOD BY SIGHT**

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES



PROTECT WITH **PARTITIONS!**

Solve YOUR
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SAFELY—SECURELY!

Made to Your
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Get 'em young!

(This article continued from page 97)

daily activities and habits of the present-day American scene.

Designing for the young

Someone has said that a package for children must be as friendly as a puppy. And if it has such friendliness it will appeal to everyone—the child who uses it and the grown-up who buys it. In the case of the miniatures, the appeal, of course, is the tiny size—the same appeal as little dolls, little books and miniature furniture.

Regular-sized packages designed for child appeal, however, require very definite techniques. Past masters in the design of child-appeal packages are the cereal makers, the cookie bakers and the confectioners. They, in turn, have borrowed from the other realms of child interest—toys, comics, children's books, TV shows, etc. Packages that attract children:

1. Must have pictures of other children, people or animals doing something that children like to do. The pictures must be realistic. If a cowboy is carrying a gun, Junior wants to see exactly what kind of a gun it is. He doesn't want a vague drawing.

2. Must be printed with bright primitive colors. Reds, yellows, bright blues and greens attract their attention. With improved methods of color printing on all types of packaging materials today, there is increasing opportunity for more appealing color effects.

3. Must be written in simple language, the same copy style that is successful for children's books, slanted to the desired age group.

4. Must have a special feature to intrigue the child's interest—a tie-in with TV, radio or other familiar advertising media, a premium offer or something to make out of the package in the way of cut-outs or games. The package itself sometimes may be designed as a re-usable toy, such as boxes that are made to look like toy houses, garages or railroad stations. One company a few years ago used milk cartons printed to simulate railroad cars, so that the child could save up and get a whole train.

5. Must stimulate appetite appeal—if it is a food product—either by showing illustrations of foods that



Easiest way to move fast is to catch on to something going like a tiger in a tantrum . . . and go swoosh with it.

Like plastics. Companies scouting for fast-moving *new areas to sell* are discovering the plastics market . . . and expanding with it.

See what's afoot: More than half of today's toys are plastic . . . and the toy business is booming. Records, pop and classical, are plastic . . . and platters are going like hotcakes. Cars, refrigerators, hardware . . . almost everything is using more and more plastics —to sell more . . . or cut costs . . . or make a better product.

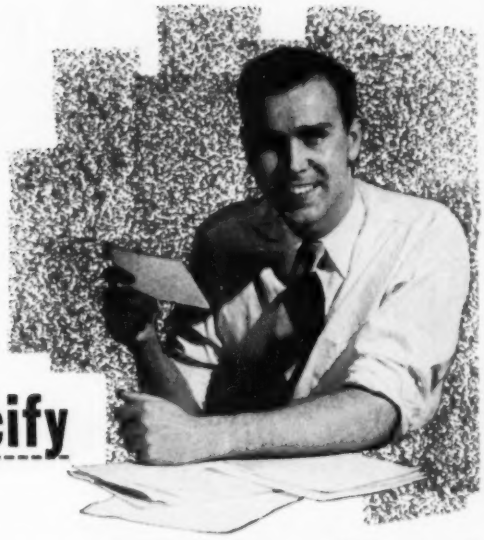
What can *you* sell to the people who use plastics? Not just the "makings" of plastics . . . but machines, tools, a raft of supplies.

To explore the field, drop a line to MODERN PLASTICS, the business magazine that has helped bring up the plastics market from a cub . . . doing a fine job for everyone who makes plastics . . . or uses plastics . . . or sells to *them*.

MODERN PLASTICS

A Breskin Publication
575 Madison Avenue
New York 22, New York
Member ABC-ABP

when you buy.. specify



ROYAL SATIN* the aristocrat of paperboard

A Butterfield-Barry exclusive for better set-up boxes for better displays



PHOTO BY EINSON-FREEMAN

The award-winning MISS RHEINGOLD MOVING BOOK DISPLAY underlying this famous eye-stopping window display is BUTTERFIELD-BARRY'S ROYAL SATIN*— produced by Einson-Freeman Co., Inc. for Liebmann Breweries, Inc., *Brewers of Rheingold Extra Dry Lager Beer.*

ROYAL SATIN* was chosen for its finer basic quality and superior finish for better results.

Ask your display producer or boxmaker for samples, or write us direct.

*Trademark

The first name in the Paperboard Field

100th ANNIVERSARY BB 1853 1953

THE BUTTERFIELD-BARRY CO., INC.

174-178 HUDSON STREET, NEW YORK 13, N. Y.

a century of progress in paperboard for packaging and merchandising

On-to-Sta 4 Color Printed Kraft Gummed Sealing Tape Pays EXTRA DIVIDENDS...

BECAUSE



★ Every carton and package leaving your plant carries your 4-colorful advertising message everywhere — at no extra cost.

★ Your packages are padlocked with your company's name—they're pilferage proof. Dust and dampness are locked out.

★ On-to-Sta tape seals and remains perfectly flat.

★ The uniform quality of On-to-Sta Kraft Sealing tape is protected in waterproof wrapping paper.

★ Our creative art staff will skillfully prepare art work for 4-color tape to fit your particular needs.

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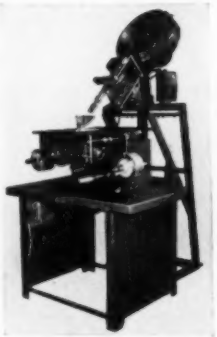
LETTERS TO EXACT SIZE TO FIT THE JOB

Now anyone can do a good job of hand lettering . . . and do it exactly the size you want to fit your layout. More than 600 variations in size and shape of letters may be produced from one templet—119 templets and lettering styles.

Try it yourself — no obligation. Write Dept. 144 today.

VARIGRAPH CO., Inc., Madison 1, Wisconsin

LOOK WHAT THE AUTO-PAK IS DOING NOW!



Auto-Pak with attachment

Over 60 filled packages per minute can now be delivered through the latest attachment to the Auto-Pak. It feeds hardware, electrical and similar products to the packaging machine which automatically forms two sheets of heat sealing material around the items, seals the four sides, cuts off and delivers a completely sealed, attractive package, one every second.

The Auto-Pak is versatile, efficient, economical. It's your best bet if you want to package your product for protection, for appearance, for ease in handling.

Write for folder and your free copy of "Unit Packaged For The Assembly Line"—a booklet describing the job the Auto-Pak does for a leading auto manufacturer.

PAK-RAPID INC.

530 N. 21st. Street, Philadelphia 30, Pa. LOcust 7-4840

New York Representative
I. J. White Company, 70 W. Houston Street, AL 4-0180

children like or by using the hero-worship appeal—"if you eat this, you'll be just like Tarzan"—an appeal that also helps Mother with nutrition problems.

6. Must be easy to recognize. Even before they can read, children recognize brands by the pictures and decorative treatment on a label. It is even more important to keep designs simple today so that they are remembered after children see them.

7. Must be designed with flexibility to accommodate the numerous changes in appeal that are being made constantly today. The cereal manufacturers and cookie bakers are well aware of this. That is why most of their packages are designed with one immediately recognizable trade-name device that stays in the same place on every package, regardless of how the other material may change to incorporate new child attractions or premium offers.

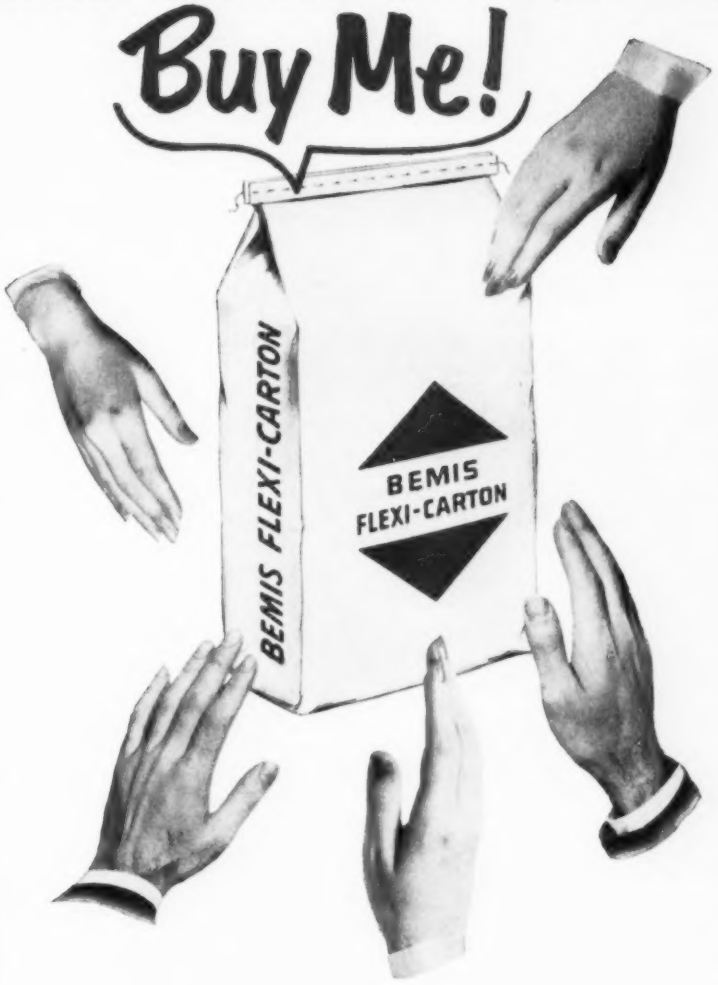
Premium in reverse

The whole subject of premiums is a story in itself, that can only be touched on here. There is no doubt that premium offers on the package sell goods to children, judging from the number that continue to be offered. How they are offered is a matter to be decided by the individual company based on the demands of its market. Most common current practice appears to be either the use of the give-away included in every package, or the self-liquidating premium offered on the package for a certain specified sum and a box top.

The life span of the premium depends on how good the premium is. According to the Post Cereals Div., General Foods Corp., the premium is usually started in relatively small quantities. If it moves well, it is continued for a longer time. In general, the cereal people say two or three months cover the life span of both packed-in and self-liquidating premiums.

A possible forerunner of a new trend is the premium deal in reverse, capitalizing on child appeal, which Colgate has just launched for Fab in supermarkets in cooperation with Plastic Molded Arts, manufacturer of plastic dolls. For 99 cents, the shopper buys a doll, packaged as one of eight in a series of what is called the "Album of Americana." With this purchase she gets a package of Fab. The dolls are packaged in folding

Put Your Product in the Shelf Package that says:



Bemis CONSUMER-SIZE Paper Bags

with the crispest, brightest printing your brand ever had

Your brand SINGS... it gets EXTRA selling power... when it's on a Bemis Consumer-size Paper Bag. No other bag-maker can beat—and few, if any, can equal—our high fidelity to detail and color. Ask your Bemis Man for the *complete* story.

One of these is the winner you need . . .



Bemis

General Offices—St. Louis 2, Mo.
Sales Offices in Principal Cities

THE BATTLE CREEK 4-PLY PACKAGE

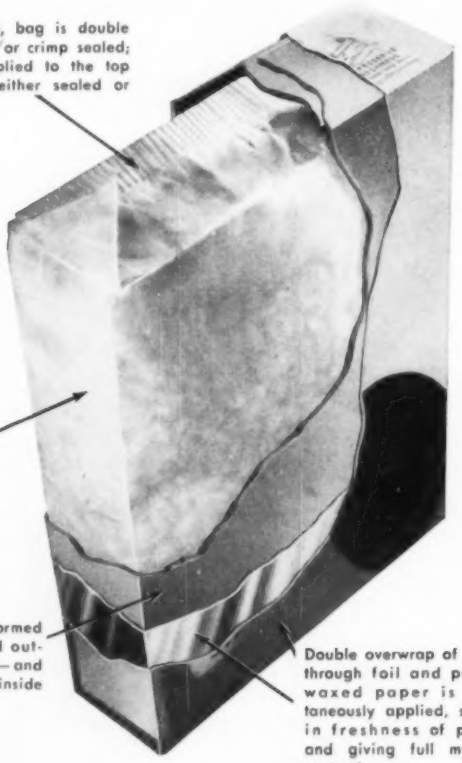
Multi-Ply Product Protection produced at High Speeds and Low Costs

If you have a food product that requires maximum protection, high speed packaging, with low unit packaging cost, the "Battle Creek" 4-ply packaging equipment may well offer you the solution for mass market merchandising. Because the machines are integrated in operation, the "Battle Creek" 4-ply packaging equipment assures you of low unit packaging cost, with minimum labor and full protection for your product.

The 4-Ply Package is particularly recommended for highly hygroscopic products; typical examples being sugar coated cereals, powder mixes, dehydrated foods, non-fat milk solids, gelatine desserts, etc. The construction of the package, and the 4-ply protection given the product is fully illustrated and described below.

Sustained high production (two sizes of machines are available, for producing up to 85 packages per minute, and up to 120 packages per minute) is accomplished by the smooth "*Continuous Flow*" principles of "Battle Creek" machines. All of the operations of feeding the flat cartons, gluing the flaps, creating the inner liner, sealing the open mouth of the liner, gluing the top flaps of the carton, and applying the double overwrap, are handled in a single coordinated packaging line on equipment built by "Battle Creek". Because the operations are fully automatic, and synchronized together with electrical controls for proper pacing of each machine in the line, a minimum of labor or supervision is required, thus adding to the low unit packaging cost.

Write for complete information on how the 4-Ply Packaging equipment will help you solve your packaging problem.



GIVES THE GREEN LIGHT TO PACKAGING PRODUCTION

Continuous Flow PACKAGING

BATTLE CREEK BREAD WRAPPING MACHINE COMPANY

BATTLE CREEK, MICHIGAN

cartons constructed to look like books with historical descriptions on the inside cover, but with absolutely no printed commercial tie-in with Colgate. The dolls represent eight noted figures in American history: Martha Washington, Dolly Madison, Betsy Ross, Barbara Fritchie, Priscilla Alden, Molly Pitcher, Mary Todd Lincoln and Clara Barton. It is the hope that little girls shopping with Mommie will become collectors of the entire series, thus getting eight packages of Fab into Mama's kitchen—a sufficient number, Colgate thinks, to make her a regular Fab customer.

An article on packaging for the young market would scarcely be complete without a word, too, about some of the firms which have made a success solely on packaged products for the kids. One of the most outstanding is Helene Pessl, Inc., manufacturers of Little Lady, Little Lad and Little Deb cosmetics and toiletries. Arnold Perlman, president of the company, has just announced a new $300,000 plant in New Rochelle for the packaging and production of the Helene Pessl items and, with these added new facilities, expects soon to top the $2,000,000 mark of his last fiscal year in the field of children's toiletries which were virtually non-existent in this country 10 years ago. Another hardy leader in the kids-toiletries field is Kidmetics, aimed at the 4-to-14 age group.

Influence on buying

As all industry focuses more sharply on the young market, more data are continually being made available to show the influence of the children on family buying habits. This information can be invaluable in helping the packager to direct his package appeals to the proper age groups and also to find out the classifications of products on which the various age groups exert the greatest brand demand.

A recent DuPont study called "Buy Me This," in which 480 mothers accompanied by children were interviewed while shopping in supermarkets around Philadelphia, indicated that 77.5% of the mothers had bought something at the child's suggestion. The principle products so purchased were: candy (37%), cookies (28.2%), cereal (18.3%), fresh fruit (10.5%), fruit and vegetable juices (10.5%), crackers (10%). Also mentioned frequently



investigate CLEVELAND CONTAINERS

METAL END FIBRE CANS FOR UNIT PACK AND INTERMEDIATE PACKING
. . . For both MILITARY and CIVILIAN USES.

SAVE TIME in packaging . . . EXPEDITE repairs by having spare parts available when needed.

MIL-C-12147(A) **MIL-C-5405** **MIL-C-12804**

Spare parts and supplies packaged in containers made to MIL-C-12147(A) meet all the requirements of Method IA and Method II Packaging. The reduction in cost from your present method of packaging may be substantial.

Fibre container packs are approved and in current use by most of the technical branches of the Government. The uses in civilian applications are becoming more numerous every day.

These cans provide a continuous barrier and permit the reduction or elimination of preservatives and internal wraps. We supply a complete service, from the design of the container to furnishing closing equipment, which is available on a rental basis.

Why pay more? For the best . . .
call CLEVELAND!

Our West Coast customers will be glad to learn that operations will start in the Los Angeles plant the latter part of November.

Our Canadian customers are now receiving the additional services of the Toronto plant.

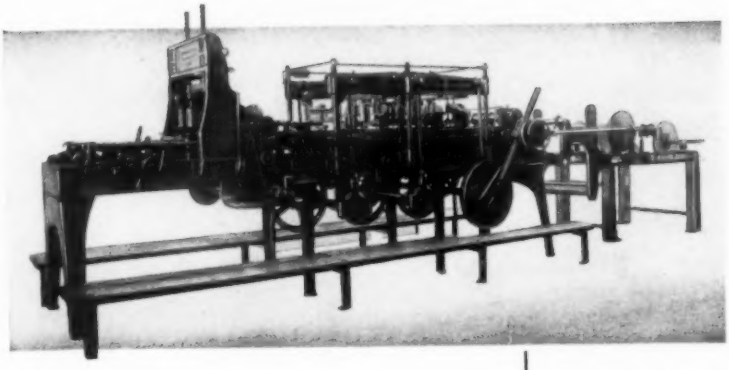
The CLEVELAND CONTAINER Co.
6201 BARBERTON AVE. CLEVELAND 2, OHIO
• All-Fibre Cans • Combination Metal and Paper Cans
• Spirally Wound Tubes and Cores for all Purposes

PLANTS AND SALES OFFICES: Cleveland, Chicago, Detroit, Memphis, Plymouth, Wisc., Ogdensburg, N. Y., Jamesburg, N. J. • ABRASIVE DIVISION at Cleveland. SALES OFFICES: Grand Central Terminal Bldg., New York City; Washington Gas Light Bldg., Washington, D.C.; West Hartford, Conn.; Rochester, N.Y.

Cleveland Container Canada, Ltd.: PLANTS AND SALES OFFICES: Toronto and Prescott, Ont. • SALES OFFICE: Montreal.

It's adjustable . . . it's automatic . . .

INMAN TRAY MACHINE FOR SET-UP BOXES



When dependable output must be coupled with flexibility and rapid changeover, it is a perfect situation for the No. 9 Adjustable Die Tray Machine.

Working from a roll of the proper width, it dies out, creases, pastes, and sets-up one piece at a time. Production: 30 pieces per minute. A solid die version of this machine will turn out up to 75M pieces per eight hour day, depending on box size.

Size range:

Depth — 1" to 4½"
Width — 6" to 12"
Length — 10" to 20"

Specifications:

floorspace	5' x 20'
horsepower	3
driving pulley:	diam. 20", face 5"
pulley speed	120 R.P.M.
weight	14,000 pounds (crated)

Designed, built, and guaranteed by Inman, manufacturer of fine boxmaking machines for over seventy-five years.

Full details on request

INMAN Manufacturing Co. Inc.
AMSTERDAM, NEW YORK

SELL FASTER . . .
BRIGHTEN BOX COVERS, LABELS, GIFT WRAPS

WITH **VELVA-GLO*** **"40"**
Fluorescent Paper

Choice of 8 extra-bright colors: blue, cerise, chartreuse, red, orange-yellow, orange-red, green and orange. All colors stable in storage, remain effective for months of interior exposure. Your design easily printed by letterpress, offset, silk screen or gravure. Order NOW from your printer, paper dealer or write us for printed samples and color card. 53

*Trademark Reg.

RADIANT COLOR CO.
Dept. 11P • 830 Isabella St., Oakland 7, California
Manufacturers of VELVA-GLO Fluorescent Papers • Cardboards • Signcloth • Brushing and Spraying Colors • Silk Screen Colors

---

LET US **SOLVE** YOUR
REGISTER AND SYNCHRONIZATION
PROBLEMS
ELIMINATE WASTE, LABOR, SET-UP TIME.
INCREASE PRODUCTION
TWO WAY
ELECTRONIC REGISTRATION
CONTROLS

COMPLETE—Both as to Mechanical and Electronic parts (also available as separate units). A complete range of sizes for any web fed and rotary equipment

COMPLETELY NEW
A correction and variable speed transmission-combined in one unit

Write for further information

MACHINE O'MATIC, INC.
2045 N. HOYNE AVE. • CHICAGO 47, ILL.

were chewing gum, doughnuts, pretzels, canned goods, potato chips, chocolate syrup and soft drinks. In this study a surprising 64.2% of the children who influenced purchasing were between 2 and 6 years old; 35.8% were between 6 and 14.

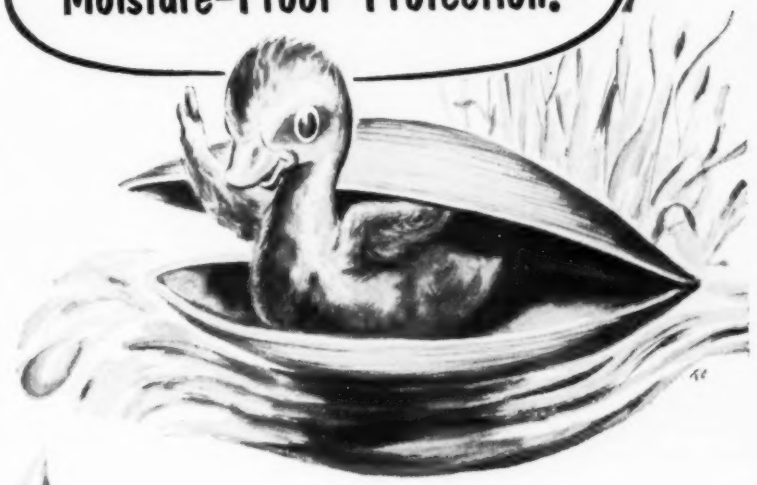
A pilot study conducted early this year may be very significant. It was directed by Dr. Raymond Franzen and Prof. Harvey Zorbaugh, director of the workshop on the cartoon narrative, New York University, and prepared by the plan, research and promotion staff of *Puck, the Comic Weekly* (see Table I). It was based on a refined probability sample in Greater New York covered by a crew of interviewers who made five independent surveys—each netting about 50 families with at least one interviewable teenager between 10 and 17. The study is being continued on a more elaborate scale for the entire country. Some of the conclusions categorized from the pilot report, however, were: that it is possible to determine whether children have buying influence on the family, even on items which adults buy for the family as a whole; that teenagers can express brand influence sufficient to effect a switch in brand preference established by adults; that there are differences with respect to buying habits in differing socio-economic strata and that brand emphasis is quite likely related to the presence or absence of influence from children.

Much valuable information on the youth market has been gathered by publications angled at youth readership, such as *Boy's Life* and *The American Girl*, published by Boy Scouts and Girl Scouts of America, respectively. Such data provide very detailed information on brand preferences and buying habits of age groups from 10 to 18. Studies directed by the Brand Names Foundation, Inc., are also helpful, although most of them cover age groups above 14 years. There are also several independent research organizations today which are specializing in the young market. Another good source is *Schoolastic Magazine's* studies of the 11-20 age bracket.

Metro Sunday Comics uses Starch readership checks that show greater thorough readership of ads by high school boys (42%) and girls (50%), than for men (15%) and women (16%).

Among other data pointing up the need for packages beamed to the

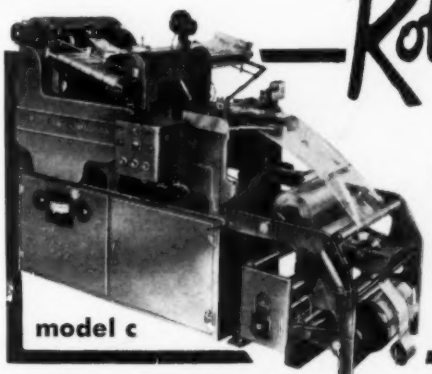
"Roto Airtight Bags Guarantee Moisture-Proof Protection!"



For perfect product protection, particular packagers prefer the machine that produces completely airtight premium cellophane bags — the versatile Roto Model C. Each seam is double sealed by heat and glue insuring complete moisture-proof protection!

PLUS — Very high speed production (up to 150 bags per minute) of consistently superb bags. You saw it operate at the packaging show.

PLUS — a big bonus! Using no special attachments or elaborate conversion preparation the Model C offers the same high production rates on polyethylene coated cellophane along with the necessary airtight protection. Heat and glue again prove to be the answer!



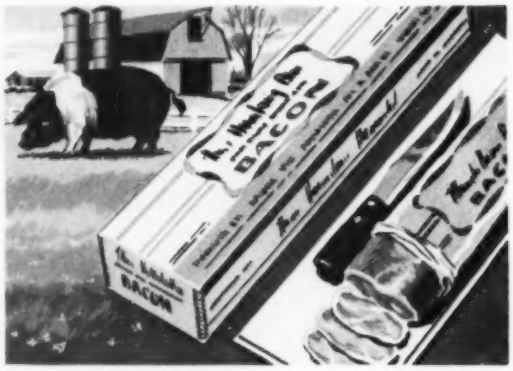
Roto Bag
CELLOPHANE BAGMAKER
FOR EASY OPENING BAGS A THUMB-NOTCH ATTACHMENT IS NOW AVAILABLE

ROTO BAG MACHINE CORPORATION
130 East 13th Street, New York 3, N. Y.

METAL EDGE
pays dividends in 3 typical industries

BRINGS HOME THE BACON!

"Our Canadian bacon and other delicacies have an 'um-m!' look in distinctive M.E. boxes that add *prestige* to our products in the finer food shops."





CUTS BOX SIZES NEEDED!

"The strength, versatility of M.E. enabled us to eliminate 60% of box sizes used. Now, we save on unit costs by ordering *larger* quantities of *fewer* sizes."

"PLUS" PACKAGING FOR ROCK BITS!

"We're really sold on M.E. packaging for our rock bits. Strength, appearance and shelf-life are tops. Boxes are adaptable to many sizes...can be assembled quickly as we need them."



METAL EDGE—*the engineered method*—*has solved diverse packaging and handling problems in over 100 American industries.*

NATIONAL METAL EDGE BOX CO.

PACKAGING • MATERIALS HANDLING • INVENTORY CONTROL

334 North 12th Street, Philadelphia 7, Pa.

METAL EDGE

kids are the TV-watcher studies. According to one of these surveys, more than half the children looking at television in the Los Angeles area asked their parents to buy TV-advertised products and nearly three out of four of the families made the requested purchase. This finding was included in a study conducted recently by Coffin, Cooper & Clay, Inc., research organization. The 3-to-10 group was reported to have made the most requests (79.7%), but the 11-to-16-year-olds had the most success in getting what they saw and wanted (78.5% of their parents bought).

These studies help to strengthen the fact that today it's a kid's world. And this is for certain when even such a conservative ethical drug firm as the Upjohn Co. begins packaging samples of its Zymadrops, a vitamin elixir, for national distribution to doctors, in a red-and-white "highly seaworthy" plastic toy Mississippi River showboat as a gift for physicians to give children taking the medicine.

Impact-load factor

(This article continued from page 156)

EXPANDED RUBBER

Advantages:

1. Easy to fabricate. Can be cut from sheet.

Disadvantages:

1. Inferior to preloaded springs—that is, larger shipping space. A 2½-in. pad will give 100 i.l.f. protection from 4 ft. 6 in.
2. Stout case required, loads again confined to small areas.
3. Pads for larger deflections are liable to collapse sideways.

RUBBERIZED HAIR

Advantages:

1. Cheaply molded to fit contours of cargo. Ideal for re-usable packs.
2. Cheaper outer containers can be used due to large distribution of weight.
3. Ease of fitting—moldings can be fitted to cases without wood screws or nuts and bolts.
4. Wide range of i.l.f.'s can be provided—the density of moldings can be varied to cope with unequal weight distribution of cargo.

Disadvantages:

1. Not so efficient as precompressed springs, 40-60% deflection obtainable.

what are wiping cloths doing in this ad?





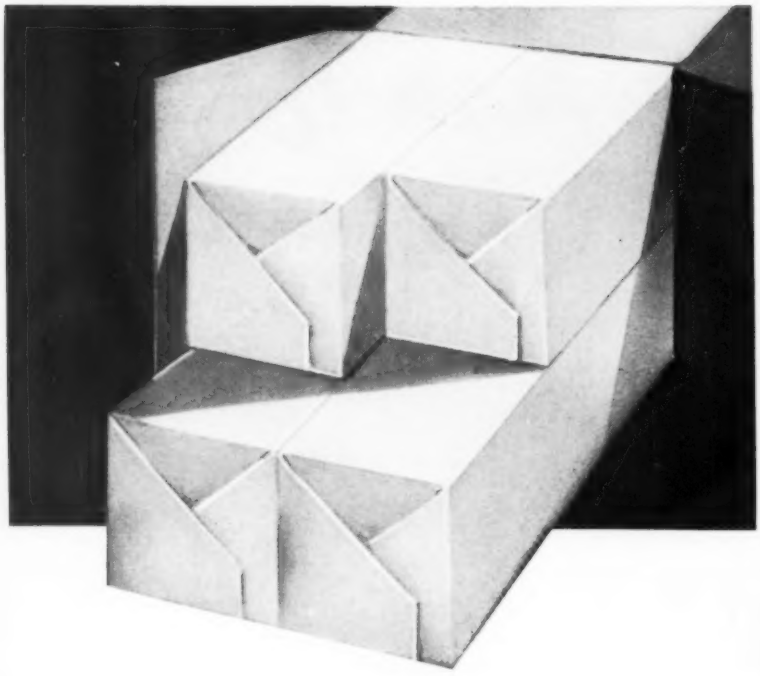
Chances are you don't make wiping cloths. But they are pictured here just as an example of the many unusual materials that can be cut from rolls with a Beck Automatic Roll Sheet Cutter. So, if you're working with any material in rolls that you find "difficult" to cut and handle, write us about it. In return you'll receive complete details on how a sheet cutter will give you smooth, high production cutting—with savings that soon pay back the machine's modest cost.

CHARLES BECK MACHINE CORPORATION
406 N. 13th Street **BECK** **Philadelphia 8, Pa.**

Pacemakers since 1864 in the ENGINEERED APPLICATION of SHEETERS and SLITTERS



Yours for the asking! Send now for this catalog describing the Beck Automatic Roll Sheet Cutter.



Patapar 30-5W

SAFEGUARDS

butter's delicate flavor

30-5W is a type of Patapar Vegetable Parchment specially designed to give butter the utmost protection at low cost. It has high wet-strength. It resists grease and moisture vapor transmission. It is NON-TOXIC. It has no odor—nothing that will impart "off" flavor. It operates smoothly on all types of packaging equipment.

Special types for other packaging needs

30-5W is just one of the various types of Patapar. Other types are used for packaging bacon, lard, giblets, ice cream, cheese, poultry, hams, celery and many other products.

Patapar is furnished in sheets or rolls, plain or beautifully printed with colorful designs. Tell us the use you have in mind and we'll send more information and samples for testing.

Paterson Parchment Paper Company
Bristol, Pennsylvania
West Coast Plant:
340 Bryant Street, San Francisco 7
Sales Offices: New York, Chicago
Headquarters for Vegetable Parchment Since 1885

Patapar
Vegetable Parchment
HI WET STRENGTH · GREASE-RESISTING

New interior packing

A special interior packing piece used by the Trumbull Components Department of the General Electric Co., Plainville, Conn., is reported to



have enabled a reduction in packaging costs and, at the same time, an increase in product protection. This new interior packing piece is kraft paper shaped in the form of a honeycomb. Trumbull says the change-over has saved almost $7,000 in the last year in wrapping costs.

Previously, the circuit breakers were packaged in corrugated boxes, with several corrugated scored sheets as buffers or spacers in each carton. To replace these corrugated sheets, this new slit-scored, double-faced honeycomb was designed. The packer now places the circuit breaker in the center of the honeycomb. He then folds up the slit scores on all four sides and slips the circuit breaker into the box. Another piece of honeycomb is placed on top as a protective buffer before the box is closed and taped.

CREDIT: *Interior packing piece, Union Bag & Paper Corp., 233 Broadway, New York.*

Aluminum gaining

The big increase in aluminum production, according to Keen Johnson, vice president and director of public relations for the Reynold Metals Co., indicates that the time is rapidly approaching when users will be able to obtain all the aluminum they can sell. New reduction plants built by primary producers are getting into production. "Of all the metals reviewed (by the President's Materials Policy Commission) it was predicted," Mr. Johnson stated, "that aluminum has the greatest growth potential within the next quarter-century and that by 1975, demand for the metal may quite possibly quintuple."

Rejections giving you trouble?

Use the triple-tested

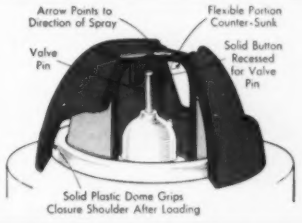
PRESDOME VALVE



No aerosol product is better than its valve—and no valve is better than Schrader's . . . produced with fully automatic machinery . . . nothing but raw materials bought outside. Schrader has the greatest research and manufacturing facilities.

The Schrader Aerosol Valves use the same time-tested seating principle as used in the Famous Schrader automotive tire valve.

Schrader Aerosol Valves mean lower rejection rates because they receive the most thorough inspection . . . they're triple tested . . . every critical component part 100% machine tested for correct tolerances. Elimination of "dud" returns from retailers protects the reputation of your product.



Schrader Aerosol Valves offer improved performance. They are positive sealing, with quick positive spray shutoff. Good-looking Presdome Caps give easy and comfortable finger-tip operation to your aerosols. You merely press the countersunk dome. Presdome Caps also have eye-catching sales appeal! Various Colors can be made to match your label on request.



Tamper-Proof Locking Tab

Schrader

REG. U. S. PAT. OFF.

AEROSOL VALVES made by the manufacturer of the Standard Tire Valve since the first Automobile

Visit the Schrader Suite at the 40th Annual Meeting of the Chemical Specialties Mfrs. Association, Mayflower Hotel, Washington, D. C. Dec. 6-7-8

MAIL THIS COUPON TODAY

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated Dept. MP
470 Vanderbilt Avenue, Brooklyn 38, N. Y.

Please send me ☐ Samples ☐ Brochure ☐ Price List

Name _____ **Title** _____

Company _____

Address _____



picture of success...

your products at home

Package your products in the containers that your customers and prospects want. Package in Lermer Plastic Vials because they offer the ultimate in eye appeal and protection and because they give your customers durable, long-lasting containers in which to retain your products. After the contents have been consumed, the containers are re-used for other purposes, and your name remains with your customers as a reminder for additional purchases. You have proved that you use the finest package available, and the cost to you is no more than ordinary packaging.

CONSIDER THESE UNEXCELLED ADVANTAGES OF LERMER PLASTIC CONTAINERS.

- They Are Shatterproof, Assuring Customer Good-Will
- 75% Lighter Than Glass, Saving You Money in Packing and Shipping
- Not Affected by Alcohols, Alkalis, Weak Acids
- Tasteless and Odorless
- Available Clear or Opaque, in a Host of Bright, Lustrous Colors
- Can be Printed or Decorated during Manufacture
- Always Uniform for Easy Labeling, Filling and Capping
- Available with Metal or Plastic Closures

Write for complete catalog information and samples. Detail your problems and let our creative staff help. Lermer is famous for Experience, Service and Creative Engineering.

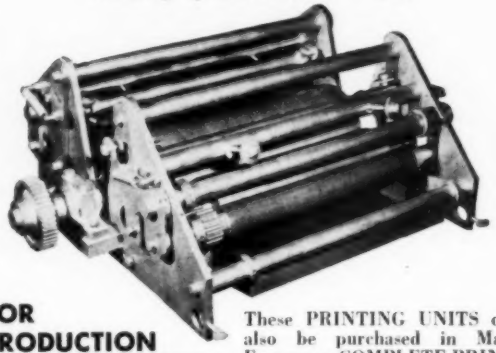
Lermer PLASTICS, INC.

PIONEERS AND PACESETTERS IN PLASTIC PACKAGING

502 SOUTH AVENUE, GARWOOD, NEW JERSEY

INEXPENSIVE . . . Individual Miniature Aniline Printing Units

10" web width
(also 15" and 20" web widths)
Printing Cylinders 4" to 7" dia.



FOR PRODUCTION OR LABORATORY

These PRINTING UNITS can also be purchased in Main Frames, as COMPLETE PRINTING PRESSES

. . . Use it in tandem with your bag making or packaging machines

. . . or use it to preprint your packaging webs.

Mount one or more on your bag or packaging machine. Print as you package!

ALSO . . . COMPLETE MINIATURE ROTOGRAVURE & ANILINE PRESSES

Write for literature and prices

MINEOLA ASSOCIATES, INC.

Formerly Francis C. Kilb Co.

140 East Second St. Mineola, L.I., N.Y. GArden City 7-7191

Reprints of articles, features and advertisements that appear in this magazine cost so little that you should really consider using them. Many companies make it a practice to have stories which have a bearing on their business reprinted for distribution to their sales staff, customers, prospects, stockholders or to other interested groups.

make profitable use of

REPRINTS

If, at any time, there is or has been something in Modern Packaging which you can use in reprint form, in quantities of 100 copies or more, write and quotations will be furnished promptly.

INDUSTRIAL MAGAZINE SERVICE

An Affiliate of Breskin Publications

575 Madison Avenue New York 22, N. Y.

Aerosol survey

The ready consumer acceptance of products packaged in pressurized containers has not only opened new product markets and new methods of product distribution, but also presents a field of almost unlimited possibilities, according to a recent survey conducted by the Department of Commerce Field Service to ascertain the important economic factors about this segment of the packaging field.

The commercial growth of aerosol-packaged products since the introduction of the disposable-type container has generally been consistent and, in instances, spectacular. Nationwide opinions vary only as to the speed of growth. Reasons given by respondents for the spectacular growth of products packaged in aerosol containers include aggressive distribution, nationwide radio, TV and newspaper advertising and the "novelty" appeal to consumers.

In the non-food type of pressure package, the 1952 output was 130% over the 1951 estimated figure, with insecticides and shave cream being the major growth items. Although no data are available on the packing of food-type pressure containers, one large dairy estimated that the annual consumption of whipping cream, the major food item, in pressure packages is about 60 million units.

It was noted in the survey that all manufacturers were cognizant of the favorable consumer acceptance of pressure-packaged products and many have established long-range programs of research to adapt their product to such packaging—even the most conservative of manufacturers.

There was general consensus on the major disadvantage of products in pressure containers—the unit price is too high. This was cited as the major growth deterrent.

Practically all products are being packaged under pressure in lightweight disposable metal cans, although glass-lined or metal-protected glass containers are in general use for packaging caustic liquids.

The majority opinion was that the field for pressure packaging of products is very broad and that to date the "surface has only been scratched." Factors reported as affecting the future growth of spray-on packaging are (1) The heavy capital outlay for facilities and equipment. (2) The lack of standardization of packaging machin-





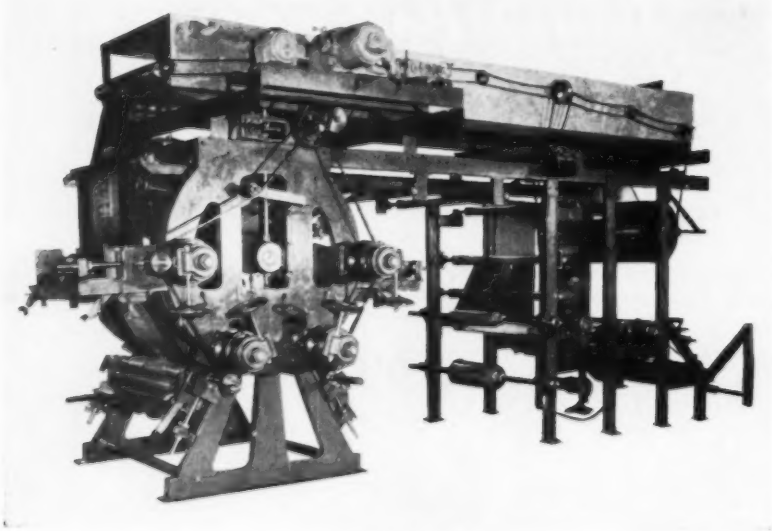
A great advancement for printing films

NEW flexographic LEMBO

4 color supported-web press

The most perplexing problems of high-speed *in-register* printing of polyethylene and other plastic films are solved by this ingenious Lembo press. The web is carried through the printing rollers on a continuous blanket, assuring perfect printing at speeds from 0 to 500 feet per minute. Compact construction. Widths from 24″ to 60″.

- **Choice of 360° planetary gear register control or electronic register control**
- **Impression cylinders taken out of contact with printing rollers by electric motors**
- **Optional unit dries ink between impressions for outstanding speed.**
- **Can be equipped for gravure printing, and with rewinds for cellophane or paper**



Full details and quotations on request

Ask about Lembo surface printing machines up to twelve colors.

LEMBO *machine works, inc.*

248 East 17th St. Paterson 4, N. J.

Manufacturers of Printing Presses and Cylinders

ery and facilities. (3) Technical problems. (4) The improvement in containers both in performance and price. (5) The development of acceptable new products. While it is recognized that many problems exist, the continued joint research and development efforts of container and product manufacturers to expand markets through consumer acceptance presents a promising outlook for aerosols.

Ice-cream sandwich

(This article continued from page 113)

lugs (they carry unwrapped sandwiches along conveyor) and removable tray under the ice-cream-making section, both to facilitate cleaning, and a stainless-steel hood over the roll stock to shield it from any possible dust or dirt during normal use and clean-up.

What makes the machine so outstanding, from the viewpoint of sanitation, is the prevention of contact with human hands. As a rule, dairy products are regarded as highly susceptible to the action of bacteria and great pains are taken to avoid contamination during all stages of handling.

An ingenious arrangement permits wafers to be loaded into the machine manually, but without being directly touched by hands. Through the cooperation of the wafer baker, Empire Biscuits in Brooklyn, the crackers come packed in corrugated paper sleeves, which are loaded to fill, usually, to a count of about 65. Out of a carton holding 12 sleeves, the operator takes one at a time and places it directly on the loading chute, tearing off two perforated flaps which serve as a protective cover, then slides the rest of the sleeve from under the crackers.

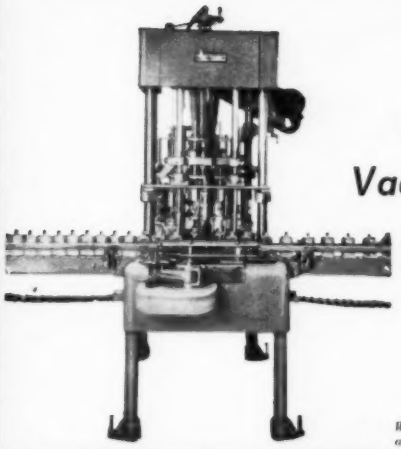
This is a far more desirable arrangement than the former system followed when the machine was first installed of loading the dispenser with a handful of wafers at a time. The operator spent her energies shifting from the wafer carton to the dispenser in an effort to keep up with the high-paced machine and the constant handling of the delicate wafers resulted in some breakage—a serious setback in costs, considering that each cracker is worth at least a half-cent.

CREDIT: *Model SMW ice-cream-sandwich maker and wrapper, The Lynch Corp., Amost & Crystal Sts., Anderson, Ind. Printed glassine wraps, Milprint, Inc., 4200 N. Holton St., Milwaukee 1, Wis.*



mrm

FILLING and LABELING MACHINES are *Simple in Design*



- reduces maintenance to a minimum
- high speed, accurate production in the least possible space

fully automatic ROTARY Vacuum and Gravity FILLER

12 to 40 spouts. Production capacity from 50 to 400 Glass, Tin or Plastic Containers per Minute.

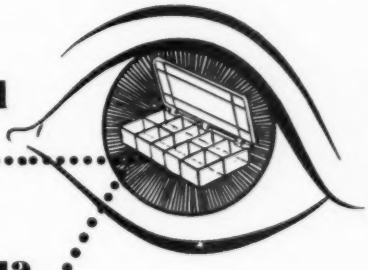
Designed for quick changeover and thorough cleaning. Fills all types of foamy and still liquids—brines, vinegars, chemicals, drugs, perfumes, syrups and cosmetics. All sizes and shapes of containers.

Write Dept. MP-11 for literature on MRM Fillers and Labelers

mrm company, inc. 191 BERRY STREET, BROOKLYN 11, N. Y.

Manufacturers of a complete line of fully automatic and semi-automatic filling equipment and fully automatic labeling machines.

does your package have eye-appeal ..... buy-appeal?





Customers reach for the product in the eye-catching package. A sparkling, new GILBERT PLASTIC package specially designed for your particular needs will make them reach for yours!

GILBERT PLASTICS is equipped to handle all your packaging problems from the planning and designing stage to the finished product. Give your product *eye-appeal* to insure its *buy-appeal*. Contact GILBERT PLASTICS *today!*

GILBERT PLASTICS, INC.
1415 Chestnut Ave., Hillside 5, N. J.

PORTABLE AND DESK MODEL MICROMETERS with easy-to-read dials



CADY Hand Model

has cast aluminum frame, shaped to fit hand; convenient trigger raises and lowers anvil; capacity is thickness up to ½"; horizontal glass covered 3" diam. dial graduated 1/1000ths of an inch. For use throughout the plant or when traveling. Extremely accurate; direct reading; no computing. Spherical end anvils available on order. $65.00, F.O.B. Chicago, Illinois.

For calipering thicknesses of Papers, Boards, Foils, Felt, Glass, Metals, Plastics, Rubber; Sheet stock or Finished Products with thicknesses to one-half inch.

CADY Standard Model

Registers thickness to 5/16"; available with 4, 7, 12 or 18" throats. Glass covered dial is 6" diameter; graduations 1/1000ths inch.

CADY Dead Weight Model

Dead Weight Anvil descends by gravity for extremely uniform pressure and completely accurate calipering. 6" diameter glass covered dial; 1/1000ths graduations.



Standard Model: $110.00; Dead Weight Model: $126.50, F.O.B. Chicago, Illinois

Write for data and prices: Burst Strength Testers, Basis Weight Scales.

E. J. CADY & COMPANY, 642 N. Harlem Ave., River Forest, Ill.

Loma Plastics uses AVERY Kum-Kleen LABELS



because

- **"they save us money—**
- **they help us strengthen product identification—**
- **and they've solved our problems of labeling plastics!"**



So says Mr. Harris Brin, vice president and sales manager of Loma Plastics. He continues, "We've used Avery Kum-Kleen Labels for over a year and have replaced both die-cut paper labels and ordinary glued-on labels. This has resulted in a considerable savings on both materials and labor—and we are so pleased that we do not use any other type of labeling!"

Avery Kum-Kleen Labels are pressure-sensitive labels that are easy to apply with a finger-touch...stick to any clean, smooth surface...no sticky fingers, no excess glue—no mess to clean! Removable, they Kum-Kleen without soaking or scraping and will never spot or harm the surface. These easy-to-use die-cut labels are available in any size, shape or color, in roll or sheet form—to meet your own specific labeling needs. Loma Plastics is just one of hundreds of alert firms who are *spotlighting* and *identifying* their products with AVERY Kum-Kleen LABELS. Write TODAY for samples and specific application data!



Patented Avery dispensers...manual or electric...feed die-cut labels off roller tape, ready for quick, clean labeling. No expensive equipment costs. *Labeling is as much as 5 times faster than ordinary methods.*

where can YOU use these labels in YOUR business?

AVERY ADHESIVE LABEL CORP. DIV. 127

117 Liberty St., New York 6 — 608 So. Dearborn St., Chicago 5
1616 S. California Ave., Monrovia, Calif. — Offices in Other Principal Cities

☐ Please send case histories and free samples to
☐ Tell us about your dispenser
☐ Have the Avery label man call

Name _____
Title _____
Company _____
Address _____
Our business is: _____

The research approach

(This article continued from page 124)

be helpful to other firms in making their choice: (1) general experience, (2) food-package experience, (3) design versatility, (4) facilities, (5) open-mindedness, (6) time factor, (7) cost factor, (8) presentation ability, (9) ability to get along with Hood groups, (10) mechanical production, (11) merchandising ideas.

Marked differences in the factors considered prohibited the application of numerical ratings, but the final selection of the designer was greatly simplified by applying ratings of plus or minus to all factors and all designers.

Paper milk cartons and ice-cream pint packages were considered first, as they represent the largest-volume items. The extension of the basic designs to other packages was controlled by inventories of old packages.

The new Hood trademark strongly dominates all milk cartons, which are one- and two-color printed, but with designating colors for each type of milk: blue for pasteurized, red-orange for homogenized, green for buttermilk, red and bright pink for strawberry, brown for chocolate, light and dark browns for coffee. A feeling of cleanliness and quality is achieved by a pleasing division of space and formalized balance.

Full-color illustration of ice cream against a festive party-streamer motif and a vertical color bar help to attract attention to ice-cream packages. Printed overwraps on pints cover corrugated insulator packs. Flavor designations are printed in red on all the ice-cream packages, with the trademark appearing on the four major panels and flavor identification on all six panels. The streamer effect is light blue against white. The vertical color bar designates flavor: blue for vanilla, brown for chocolate, pink for strawberry, aqua for vanilla-strawberry-chocolate, tan for coffee. Similar treatment has been adapted to the ½-gal. cartons and to the pails for dipped ice cream, except that the ice-cream illustrations are not used on these.

An interesting detail of the scallop that separates the solid color bar from the party-streamer side of the packages is that it follows in form the curves in the "o's" of the Hood logotype. Thus, an added distinctive effect is gained.

Adaptability of the trademark sym-

bol and flexibility of the design is indicated by the manner in which it has been applied to packages for specialties such as cottage cheese, old-fashioned cottage cheese, soured cream. Butter cartons have also been brought into the family with a bright green and gold-yellow package for top-quality Jersey Belle butter. The company's Fine Creamery butter carton appears in red and blue green.

Says P. B. Eaton, Hood advertising manager, "Mere words are inadequate to express the enthusiasm the new designs have created in the Hood sales organization, or the acceptance by dealers and consumers."

CREDITS: *Design program, Robert G. Neubauer, Inc., 234 Greenfield St., Fridgeport 5, Conn. Butter cartons and ice-cream "Polar-Sealed" wraps, Marathon Corp., Menasha, Wis. Cottage-cheese cartons, Paper Container Div., Continental Can Co., Inc., 349 Oraton St., Newark, N. J. Egg cartons, Robert Gair Co., Inc., 155 E. 44 St., New York 17. Half-gallon containers and pails for ice cream, Bloomer Bros. Co., Newark, N. Y. Milk cartons, (Canco) American Can Co., 100 Park Ave., New York 17; (Pure Pak) International Paper Co., 220 E. 42 St., New York 17; Kieckhefer Container Co., P. O. Box 710, Camden, N. J.; Sealright Co., Fulton, N. Y. Sour-cream carton, Lily-Tulip Cup Corp., 122 E. 42 St., New York 17.*

Military packaging

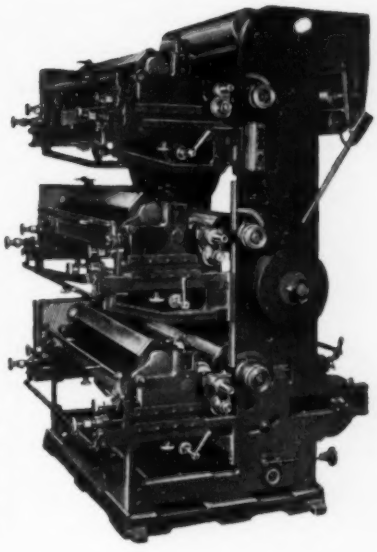
Current military packaging procedures assure our military personnel of receiving equipment in good condition and save money, Capt. C. A. Blick, SC, Office of Naval Material, told the National Security Industrial Assn. at its recent annual meeting in New York.

"At the beginning of the Korean conflict," said Capt. Blick, "much military material was in the standard domestic pack." This happened when large amounts of supplies had to be sent overseas on such short notice that time prevented repackaging; these domestic containers failed. Capt. Blick added that greater emphasis was placed on the return to "sound packaging principles and lessons learned in World War II—tempered by current developments." As a consequence, the Office of Naval Material found during a recent packaging survey in the forward areas of the Far East that "material packaged in accordance with existing regulations is generally being received in ready-for-issue condition."

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Grocery Store Products Co.
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WANTED: Good used 3 color Aniline press suitable for printing Cellophane and Polyethylene. Also, used bag making, slitting and rewinding equipment. Box 646, Modern Packaging.

WANTED: Simplex cellophane bag machine in excellent condition. Advise model, serial no., age, usage, other specifications, and best cash price. Modern Packaging Co., Mt. Holly, N. J.

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REPRESENTATIVES OR MFRS. AGENTS: To handle volume packaging line consisting of plastic bags, pouches, cases, containers, and specialty items for all types of industry. Samples, sales literature, and leads furnished. Commission basis. May handle non-conflicting allied lines. Send complete resume of experience, other lines carried, and territory covered. Box 650, Modern Packaging.

SALESMAN: We need a high grade intelligent above average salesman to sell re-use packaging in New York and New England. Company well established doing business nationally with many nationally known accounts. Creative ability—design and color sense—natural curiosity—profit sense and willingness to work are all necessary for success in this field. Opportunity for high income excellent. Write us if you're good and want to prove it. We'll happily contact you if your qualifications indicate we can help each other. Box 648, Modern Packaging.

SALESMEN: Leading converter and printer of cellophane, pliofilm, polyethylene, acetate, glassine and foil in rolls, sheets and bags. Seeking experienced representatives. We now have established well paying territories open in the east and middle west. Write us in confidence giving complete information. Cellu-Craft Products Corporation, Flushing, New York

SALES REPRESENTATIVES: Leading manufacturer of polyethylene film requires additional sales representation in many territories. Commission basis. Must have knowledge of packaging industry. Send complete resume of experience, education, age, photo, present lines and area covered. Attention: Director of Film Sales. Box 652, Modern Packaging.

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Box 653, Modern Packaging

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MISCELLANEOUS

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PLASTIC SCRAP AND REJECTS IN ANY FORM: Cellulose Acetate, Butyrate, Polystyrene, Vinyl, Polyethylene, etc. We pay top prices for clear, colored and printed scrap in any quantity. Box 641, Modern Packaging.

FOR SALE: 250M Waxed Plain Cartons 1 1/2" x 6" x 3 7/16" Pint Liquid. 50M Waxed Plain Cartons 1 1/2" x 3 7/16" 1/2 Pint Liquid. Samples on request. Vogt's Ice Cream, Inc., 180 Forest Ave., Englewood, N. J.

DESIRE TO PURCHASE: Celanese film P904 formulation. 88 to 200 gauge. Full or partial rolls, surplus stock. Also Plexiglas sheets. Commercial Plastics & Supply Corp., 630 Broadway, N. Y. C. GR 7-5000.

PLASTIC SCRAP: Cellulose Acetate and rigid vinyl sheet scrap in any quantity. Also Polystyrene, Acetate, Butyrate molded rejects, scraps and excess molding powder inventories. Box 643, Modern Packaging.

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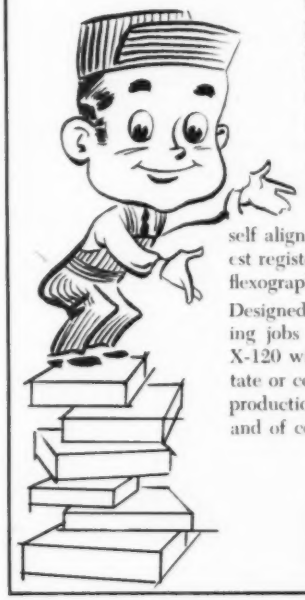
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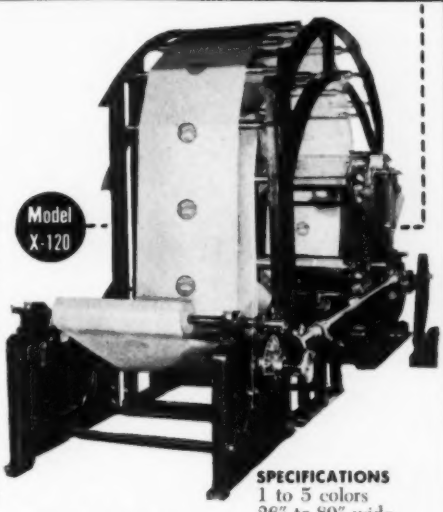
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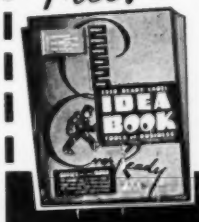
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Styrene Plastic

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CITY, ZONE, STATE _____



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